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14 September 1979

# Worldwide Report

NUCLEAR DEVELOPMENT AND PROLIFERATION

No. 9



FOREIGN BROADCAST INFORMATION SERVICE

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NUCLEAR DEVELOPMENT AND PROLIFERATION

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FRG EDITORIAL EXAMINES INTERNATIONAL NUCLEAR SITUATION

Frankfurt/Main FRANKFURTER ALLGEMEINE in German 16 Aug 79 p 1

[Editorial by Robert Held: "Collision of Interests"]

[Text] Up to 1974 the nuclear world was orderly: The nuclear non-proliferation treaty was extensively in force, the five nuclear-armed powers were simultaneously the five permanent members of the world security council. Then India -- thanks to misuse of Canadian aid -- detonated its bomb. The fear of rampant spreading of the nuclear secret even as far as the hands of small potentates determines a non-proliferation treaty which is no longer based on trust but on controls or sheer strangulation.

For that is what is eerie in today's world situation: Whoever can obtain the capability of building a bomb by whatever means takes another step up in the world pecking order, moves from the have-nots into the club of those who have and may in the end decide what the others may not have.

This absurdity becomes even worse because, in addition to what they should not have, for half a decade now some very useful things have been included, in total contrast to the concepts of the original non-proliferation treaty: essential parts of that peaceful nuclear power industry for which so many nations are crying.

Nevertheless, real nuclear power includes less the bomb secrets than the buildup of a large nuclear industry in which the "peaceful" secrets and the "know-how" which can only be gathered over decades play a much greater role; one talks about the necessity of 15 years of preliminary running time. Countries such as Germany and Japan naturally had this period behind them long ago. In that event the FRG is therefore only 2 to 3 months "away" from the bomb. There is no intent whatsoever behind this proximity to the bomb. And what keeps us at a distance from it is less the various controls exercised by different sides than our express renunciation in principle.

The sore point in the collision of interests between the United States (with which the Soviet Union fully concurs) and the nuclear power industry of the FRG lies in the up to now unalterable fact that in every peaceful utilization of nuclear power plutonium is produced which in case of need can serve

as raw material for bombs even without reprocessing. And that in a reprocessing plant the separation of weapons-grade plutonium would only be a matter of days, an alarmingly short time span from the viewpoint of international control.

This is why the United States wants to usurp the international right to make all national reprocessing plants in the world dependent on its approval. If this need for revision of the part of the Americans were to succeed, it would also retroactively threaten the Gorleben plan. This American need for revision as early as in 1978, through unilateral "retroactive" legislation, disturbed the most important element of international nuclear politics: trust. In this connection one could also, says a foreign observer ironically, assume something entirely different: That the 5,000 to 8,000 nuclear warheads stored in the FRG could become "nationalized" overnight after a political revolution. Motivated trust must be more important to Washington vis-a-vis us than controls.

In the strict ~~parallel~~ thinking of some North Americans there is naturally a tendency to simplify in the face of such confusion. They would like to revise the entire ~~face~~ of man. Because in addition to horizontal proliferation -- the spreading of bomb secrets among supposedly "unauthorized" nations -- there is also a "vertical" proliferation that threatens world peace: the race, only slightly restrained by SALT II, of the two superpowers for increasingly terrible weapons. In the opinion of Canadian Trudeau, a "strategy of suffocation" would be necessary: no more nuclear bomb tests, but also no tests involving atomic weapons carriers, missiles, aircraft and the like. But then also prohibition of all production of fissionable material usable for bombs. Which thought leads deeply into the area of "peaceful" utilization of nuclear power and would extensively limit this.

But the reality of this globe is that the tremendous antagonism indicated by the catchword "North-South dialog" also participates in the decision of this issue. Most Third World nations are crying for energy and their spokesmen regard our internal nuclear problems as nonsense, loss of time, and even suspect that we are only interested in denying them this energy technology for reasons of domination. Herein lies also the actual reason for the future oil crisis and, if one sees it that way, a future coal crisis. If India wants to achieve only one-third of the per capita energy use of Europe it would need one billion tons of coal annually.

This is the actual pressure which burdens this world and will one day prevail over the local emotions between Wyhl and Gorleben. The "policy of denial," the in itself well-founded refusal policy which the North Americans themselves would like to use against us, will be blown apart by the population explosion of this world. Then, at the latest, one will dare to remember that Gorleben alone would have delivered as much energy as half of all German coal production.

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CSO: 5100

PAKISTAN VOICES CONCERN AT U.S. CAMPAIGN AGAINST NUCLEAR PROGRAM

Escalation Regretted

Karachi Domestic Service in English 1700 GMT 14 Aug 79 BK

[Text] Pakistan has deeply regretted the escalation of the campaign by the United States against Pakistan's peaceful nuclear program. The United States ambassador was summoned to the Foreign Office in Islamabad today and informed of the Pakistan Government's serious concern over the stepping up of the campaign of threats and intimidation against Pakistan's peaceful nuclear program. His attention was drawn to the article by Richard Fort in the New York TIMES last Saturday in which he had reported the establishment of a U.S. inter-agency task force headed by Mr Gerald Smith of the State Department with the responsibility of taking deterrent measures against Pakistan, including a possible commando operation by the U.S. paramilitary force to destroy Pakistan's nuclear facilities. The ambassador was told that the setting up of such a task force constituted an escalation of the campaign which began with the CBS broadcast on the 1st of June inciting Israel, India and even the Soviet Union to destroy Pakistan's budding nuclear facilities.

This was followed by an unnamed U.S. official's statement to the correspondent of the Hindustan TIMES suggesting that if India could take out East Pakistan in 14 days there was no reason why it could not take out Pakistan's nuclear facilities in 14 minutes.

As recently as last Friday Senator Percy alleged in a statement in Calcutta that Pakistan was going ahead with a bomb which would have within its range the cities of Delhi, Bombay and Calcutta. The senator's statement amounted to an incitement to India, with which Pakistan desired the best of relations.

The ambassador was informed of the Pakistan Government's deep regret that an ally and a traditional friend should be considering a course of action the consequences of which for the peace and stability of the region could be incalculable. He was told that should such incitements to aggression or threats of direct action by the United States itself continue, Pakistan will be left with no option but to take steps for its security through international forums.

It was also pointed out to the U.S. ambassador that the brief denial of the New York TIMES report by the State Department spokesman referred only to covert action. It did not rule out the possibility of action by paramilitary forces, which had been included among the options considered by the task force and which would amount to outright aggression.

## Defense Minister Resists Pressure

Hong Kong AFP in English 0852 GMT 14 Aug 79 BK

[Text] Karachi, 14 Aug (AFP)--Pakistan's Defence Minister Ali Ahmed Talpur has said his country would not succumb to external pressures over its nuclear programme and was fully prepared to guard its vital national interests.

In an interview published in the Pakistani press today marking the nation's independence day anniversary, Mr Talpur referred to a New York TIMES report quoting U.S. State Department sources about the possibility of American commando action to sabotage Pakistan's nuclear enrichment plant.

The defence minister said the government was capable of meeting any external threat forcefully and defending its vital installations. Pakistan was a sovereign and self-respecting nation and it would not tolerate dictates from outside on the issue of developing nuclear energy or on any other matter.

He reiterated that Pakistan's nuclear programme was peaceful and not aimed at developing atomic weapons. Pakistan was a developing nation with scarce energy resources and therefore it had to find ways and means to meet the challenge of development, especially in view of the frequent increases in oil prices.

Mr Talpur said it was the sovereign right of Pakistan to make its own options about energy resources and the arguments of the opponents of Pakistan's nuclear programme were "completely untenable." If today Pakistan accepted the argument that it should not develop nuclear energy because of certain implications, then tomorrow "we may be asked not to go in for tractors and combines for modernising our agriculture or opt for electronics to accelerate industrialisation. We may be told to be content with the bullock-cart, hoe or the steam locomotive."

The defence minister said no country should have fears about Pakistan's nuclear programme in view of the repeated assurances given by President Ziaul Haq that the programme was for peaceful purposes.

The government, he said, had taken every step to assure all countries about Pakistan's peaceful intentions. But after this assurance if some hostile quarters had any doubts left, Pakistan would not let them inspect its laboratories. This was not done anywhere, he added.

CSO: 5100

## WORLDWIDE AFFAIRS

### GREEK KKE (INTERIOR) REJECTS INSTALLATION OF U.S. MISSILES

Athens I AVYI in Greek 11 Aug 79 p 1 AT

[Text] The Greek Government should not accept the installation on our soil of Pershing and cruise missiles. On the contrary, it should proceed with the removal of the already stored nuclear weapons. This demand was expressed yesterday by KKE (Interior) in a statement prompted by the revelation of U.S. plans to install new types of missiles in Europe.

The statement's text is as follows:

"The Americans are preparing to install nuclear cruise and Pershing missiles in Europe, something that creates more danger for Europe and for international detente.

"Within the framework of these plans, it is certain that the Americans will ask Greece, which already has nuclear weapons on its soil, to also accept these new weapons of mass destruction. Actually it is possible that these will be used as a negotiating card at this stage when our country is under pressure from Washington to come to a compromise with Ankara at the expense of our national interests, given the fact that the United States is supporting Ankara which it considers to be the basic mainstay of its policy in our broader area.

"The Greek Government should not accept these missiles. On the contrary, it should proceed with the removal from the country of the nuclear weapons that are already stored here as a contribution to the denuclearization of the Balkans and the Mediterranean.

"All the patriotic and peace-loving forces of the country must intensify their vigilance and their struggle against multilateral U.S. pressure in order to guarantee national independence and national interests."

CSO: 5100

## WORLDWIDE AFFAIRS

### CONFERENCE DELEGATES CALL FOR U.S. NUCLEAR WEAPON REMOVAL

Pyongyang KCNA in English 0916 GMT 12 Aug 79 SK

[Text] Tokyo, August 11 (KNS-KCNA)--Twenty-six overseas delegates from the United States, England, the Netherlands, India, Zimbabwe, Australia, New Zealand, etc. attending the 1979 World Conference Against Atomic and Hydrogen Bombs in Hiroshima published the "Statement on Potential Nuclear Holocaust Over Korea" in joint name on August 6.

The statement reads: We, the undersigned, overseas delegates meeting at the 1979 World Conference Against Atomic and Hydrogen Bombs in Tokyo and Hiroshima, Japan, July 31-August 6, 1979, noted with deep concern that the heretofore-available figure of the victims of the atom-bombing of Hiroshima and Nagasaki did not include tens of thousands of Koreans killed instantly there and that thousands of Korean survivors still today suffer from the aftereffects of that atom-bombing.

We want to alert the world public to potential nuclear holocaust that may envelop the Korean Peninsula. The American administration refused to withdraw an estimated 700 nuclear warheads kept in place in South Korea, freezing further withdrawals of its armed forces from there for another two years till 1981. The American arms buildup in this region of Asia is continuing at an alarming tempo. Warning that the presence of nuclear weapons in South Korea with their use being openly threatened represents a grave encroachment on the dignity of the Korean people and the rest of mankind and that their presence functions as a major source of constant menace to the peace and security of northeast Asia, we call upon the administration of the United States:

(1) To fulfil its pledge to withdraw all its nuclear weapons and armed forces from South Korea, and

(2) To halt military assistance in any form which may aid South Korea in acquiring nuclear weapons.

CSO: 5100

U.S. NUCLEAR DUMP PROPOSAL CONTRAVENES SOUTH PACIFIC STAND

Sydney THE SYDNEY MORNING HERALD in English 21 Aug 79 p 13

[Text]

**CANBERRA.** — The United States' proposal to use a Pacific island as a nuclear waste dump directly contravenes a recent resolution passed by the South Pacific Forum, and supported by Australia.

The resolution strongly condemned any move to use the Pacific as a dumping ground and expressed grave concern about the environmental hazards involved in such a project.

The United States is considering the purchase of one of the three Pacific islands, of Palmyra, Midway and Wake, for use as a storage ground for spent nuclear fuel.

Palmyra, a 600-hectare atoll, 6,400 km from Sydney, is understood to be the leading contender and officials estimate that the United States could buy it for \$16 or \$18 million.

In July, the 10th South Pacific Forum, held in Honiara, Solomon Islands, considered the possibility of the US using the Pacific region as a dumping ground for spent nuclear fuel.

The meeting was attended by heads of government or ministers from Australia, the Cook Islands, Fiji, Kiribati, Nauru, New Zealand, Niue, Papua New Guinea, Solomon Islands, Tonga, Tuvalu and Western Samoa.

The following resolutions were adopted:

"Nothing the proposal currently under examination by the United States of America to store its spent nuclear fuel in either Midway, Wake or Palmyra in the Pacific.

"Believing that in a continental area such as the United States, leaching of nuclear waste would be less likely to be Palmyra, with a mass of moving water containing marine resources in its immediate surrounds.

"Bearing in mind their determination to protect the livelihood of their peoples and the Pacific environment.

"Express their grave concern at the possible environmental hazards in the event of the Pacific becoming an international dumping ground for nuclear wastes, notwithstanding that the expressed intention of this proposed measure is to further limit the possibilities for the proliferation of nuclear weapons.

"Strongly condemn any move to use the Pacific as a dumping an environmental hazard than in the case of an island, such as ground for nuclear wastes.

"Urge the United States to store its nuclear wastes in the USA continent and request the chairman of the tenth South Pacific Forum to convey this resolution to the Government of the United States of America."

Yesterday, a spokesman for the US Embassy in Canberra, Mr Christopher Squire, said the US investigations were only in the preliminary stages.

In Wellington yesterday the New Zealand the Prime Minister, Mr Muldoon, said he was opposed to the American plan because international terrorists could raid the island and steal the waste for conversion into nuclear weapons.

## WORLDWIDE AFFAIRS

### JAPANESE PRESS SAYS DOCUMENT INDICATES NUCLEAR WEAPONS ON OKINAWA

Hong Kong AFP in English 1615 GMT 15 Aug 79 OW

[Text] Naha, Japan, Aug 15 (AFP)--A U.S. Defense Department document has indicated the presence of American nuclear weapons on the Japanese islands of Okinawa, against the Japanese nonnuclear policy.

This was reported today by the Japanese news agency JIJI Press which published a copy of the document entitled, "Security Criteria and Standards for Protecting Nuclear Weapons."

The U.S. military authorities in Okinawa have been keeping the document which was dated July 30, 1974, two years after the Okinawan Islands in the East China Sea were returned to Japanese rule in 1972 after post-World War II U.S. military control.

The document, a Department of Defense directive, noted it applies to all organizations responsible for the protection of American nuclear weapons, JIJI Press reported.

Japan, which was atom-bombed at the end of World War II, has long been maintaining a government policy to ban the manufacture, possession and presence of nuclear weapons in its territory.

JIJI Press, however, quoted U.S. Defense Department officials in Washington as saying that the document does not necessarily mean there are nuclear weapons in Okinawa. It was natural that such a document was sent to U.S. military units in Okinawa as preparation for their transfer to other areas which store nuclear arms, the officials said. They noted that it is a U.S. Government policy not to make public where American nuclear weapons are stored.

The 24-page document contains reference items, definitions of terms, and criteria and standards for protecting nuclear arms--ranging from general rules to procedures for transportation--and refers to the aptitude of personnel charged with nuclear weapons, JIJI Press said.

CSO: 5100

## JAPANESE ATOMIC ENERGY COMMISSION DECIDES NOT TO IMPORT CANDU REACTOR

### MITI Minister Favors Reactor

Tokyo KYODO in English 0721 GMT 7 Aug 79 OW

[Text] Tokyo, Aug 7 KYODO--International Trade and Industry Minister Masumi Esaki Tuesday asked the Atomic Energy Commission not to hastily decide against the introduction of the Canada-developed Candu heavy water reactor. In a meeting with Science and Technology Agency Director General Iwazo Kaneko, who is also chairman of the commission, Esaki expressed the hope that the commission hold another round of talks with ministry experts before a final decision is made on Japan's next mainstay reactor to replace the light water reactors currently employed in nuclear power generation. Accepting Esaki's hope, Kaneko promised to have talks between ministry experts and the commission, which is taking a negative attitude toward importing the Candu reactor. Kaneko said he agreed with Esaki that the commission should refrain from making a final decision while he and Esaki are out of the country.

This means that no conclusion will be made by the commission until early next month because Kaneko and Esaki will soon leave the country for trips abroad. Esaki and Kaneko met to review remarks made Monday by Susumu Kiyonari, acting chairman of the commission. Following a meeting with Esaki Monday, Kiyonari announced his plan to make a final decision on the Candu reactor within this week. The commission, the supreme decision-making organ on Japan's energy policy, has been studying whether Japan should adopt the Candu reactor or the advanced thermal reactor currently being developed domestically.

The commission is reported to be taking a position favoring the domestically developed reactor rather than the introduction of the Canadian Candu. In his talks with Kiyonari, Esaki reiterated his ministry's strong enthusiasm for the Candu reactor. Esaki said he respects the technical authority of the commission but added that noting relations between Japan and Canada the question of whether or not to introduce the Candu reactor should be considered from the standpoint of a political matter.

## Commission Votes Against Reactor

Tokyo KYODO in English 0631 GMT 10 Aug 79 OW

[Text] Tokyo, Aug 10 KYODO--The Atomic Energy Commission decided Friday not to import the Canadian heavy-water reactor Candu. Iwazo Kaneko, director-general of the Science and Technology Agency, made the decision at the strong request of all four members of the commission. The decision was made on the ground that import of Candu would not be in accord with Japan's policy on development and utilization of atomic energy. Kaneko earlier intended to put off a decision on Candu due to the strong request of the International Trade and Industry Ministry and Electric Power Development Co., both in favor of Candu. The decision on Candu had been pending due to strong protest of the ministry since the Atomic Energy Commission informally decided not to buy Candu last April. Kaneko told reporters that he failed to persuade the commission to put off the decision. He telephoned Masumi Esaki, minister of international trade and industry, and Chief Cabinet Secretary Rokusuke Tanaka, asking them to agree to the decision.

## MITI 'Angry' Over Decision

Tokyo KYODO in English 0139 GMT 11 Aug 79 OW

[Text] Tokyo, Aug 11 KYODO--The Ministry of International Trade and Industry is angry about the Atomic Energy Commission's (AEC) decision against the proposed import of Canada-developed Candu deuterium reactor, officials said Saturday. The atomic energy commission, in making the decision Friday, crushed the ministry's hope to diversify Japan's development of nuclear energy and to deepen its ties with Canada, a major supplier of raw materials for this country, MITI officials noted. They said the ministry will now seek a high-level political decision to overrule the AEC decision. Economic relations between Japan and Canada would face difficulties if the import of Candu reactors is finally denied, they said.

## Dispute Over Decision Continues

Tokyo KYODO in English 0506 GMT 14 Aug 79 OW

[Article by Hidesuke Nagashima]

[Text] Tokyo, Aug 14 KYODO--Stepped-up political maneuverings are expected in the smoldering dispute over the proposed introduction of Canadian-built nuclear power reactors to Japan. The dispute over the Candu reactor is far from over, despite the Atomic Energy Commission's recent decision against the proposal.

Prime Minister Masayoshi Ohira is supposed to have the final say in the matter but there is a catch: Under Japanese law, the Prime Minister must "respect" decisions by the AEC, though it is technically an advisory council to him.

Some Japanese Candu advocates have denounced the AEC for making a unilateral decision while Canadian officials have been quoted as saying the decision could prove a "death sentence" for Canada's nuclear industry. The decision, without ending the dispute over

the pros and cons of the Candu, has stirred a new controversy in Japan over the AEC's power. The AEC last week formally decided that despite the good characteristics of the Candu, the natural uranium-burning heavy-water reactor should not be introduced to Japan at this time.

The decision was a sharp setback to Candu advocates at Japan's Ministry of International Trade and Industry as well as to Canada's Prime Minister Joe Clark, who tried during the Tokyo economic summit in June to convince the Japanese to buy the reactors. Candu, short for the Canadian deuterium and uranium reactor, burns natural uranium, unlike the more common light-water reactor fueled by enriched uranium. Trying to counter the AEC decision against the Candu, MITI plans active consultations with the Science and Technology Agency, the Foreign Ministry and other government offices. Officials say the Candu issue should be considered not just in the technical perspective but in the political perspective, since it involves Japan's "energy security" and economic ties with Canada, a major resources supplier.

They say Prime Minister Ohira should make an independent political decision on the question, in light of Prime Minister Clark's personal appeal to him for the purchase of the reactor. Canada has been particularly eager in selling the Candu, having sold mostly raw materials and little industrial technology to Japan in the past. The Candu has now become a symbol of Canada's campaign to sell advanced technology overseas. In the world nuclear reactor market, the Candu is competing with U. S.-built light-water reactors.

MITI has been advocating the introduction of Candu reactors for use by the semigovernmental electric power company, hoping it will lead to increased Canadian supplies of uranium, oil and tar sands to energy-short Japan. Officials point out that the natural uranium-fueled Candu would also diversify the nuclear fuel sources of Japan, which is now totally dependent on the U. S. for enrichment of uranium for its existing light-water reactors.

But most AEC commissioners, cost-conscious electric power companies and other domestic interests have favored Japan's independent development of reactor technology.

The AEC decided against the proposed Candu import on grounds it would:

- Affect Japan's on-going project to develop on its own a new type of reactor, known as the advanced thermal converter reactor.

- Run counter to Japan's nuclear fuel cycle plan, based on the cycling of spent nuclear fuel for use by fast breeders and other reactors. Spent fuel from the natural uranium-fueled Candu would entail a higher reprocessing cost.

Iwazo Kaneko, Science and Technology Agency director general who also chairs the AEC, was in the unenviable position of being under pressure from both anti-Candu commissioners and pro-Candu MITI officials. Actually, the four AEC commissioners already took an informal decision against the Candu in April, but had been pressured into postponing an official announcement on the decision several times for political reasons.

MITI officials have resorted to delaying tactics, citing possible effects that a formal decision against the Candu could have on the Canadian general elections and the Tokyo summit. After the summit in June ended, the AEC commissioners decided that there should

be no more delay in finalizing the decision. But MITI Minister Masumi Esaki, who is in charge of Japan's energy administration, intervened and asked Prime Minister Ohira that a formal decision be postponed again. But the AEC commissioners were no longer willing to wait. At last week's special session, Chairman Kaneko urged the commissioners to delay finalizing the decision again, but they refused. In the end, Kaneko had to go along with the majority view in deciding against the Candu import.

Though MITI officials are expected to continue campaigning for the Candu introduction, they would have difficulty in having the AEC decision reversed because of the provision giving the AEC special power that other advisory groups do not enjoy. But MITI officials find some hope in the AEC report on the decision stating that Japan's atomic energy development policy, including the Candu question, will be reviewed as required in case there are developments necessitating such a review. Officials also note that the provision in question says that the prime minister must "respect"--but not blindly accept--AEC decisions.

Japanese officials say Canada is unlikely to take any immediate action to retaliate against the latest AEC decision. They do say, however, the decision could affect Japan-ese-Canadian economic relations in the long range.

The Electric Power Development Co. says it awaits a formal decision by the government on the question, pointing out that the AEC has no executive power. The company has a big stake in the Candu, having invested yen 1.5 billion in research and development for the Candu reactor. Whatever decision is made finally on the matter, it will have a major impact on Japan's future energy policy.

CSO: 5100

FRENCH DEFENSE MINISTRY REFUSES TO COMMENT ON NUCLEAR TEST

Hong Kong AFP in English 0938 GMT 8 Aug 79 OW

[Text] Paris, Aug 8 (AFP)--The French Defense Ministry today refused to confirm or deny that France triggered a powerful nuclear test blast under the South Pacific Ocean on July 25 and that it caused a small tidal wave.

New Zealand's national seismological observatory announced last night that it detected a blast equivalent to an earthquake with a force of 6.3 on the Richter scale--the most powerful French test explosion in four years. Seismologists estimated the power of the detonation to be about half a megaton (equivalent to half a million tons of TNT).

A tidal wave injured two people that day on Mururoa Atoll 4,800 kilometres (2,900 miles) northeast of New Zealand where French underground test blasts are carried out. The French Atomic Energy Commission commented at the time that tidal waves were a frequent natural phenomenon in that area.

A Defense Ministry spokesman today recalled that the Ministry "customarily refrains from any commentary on reports about French nuclear tests in the Pacific, either to confirm or deny them." He declined to comment on the tidal wave for the same reason.

New Zealand's major afternoon newspaper, THE AUCKLAND STAR, criticized acting Prime Minister Brian Talboys today for failing to make a specific protest over the July 25 test. THE STAR editorialized: "We certainly do not want the Pacific neighbourhood racked with more artificial earth tremors and who-knows-what environmental damage." It suggested that New Zealand support Pacific Ocean environmental groups in demanding that France test atom bombs on its own soil. The Greenpeace Foundation of New Zealand sent a letter to French President Valery Giscard d'Estaing protesting against continued nuclear blasts.

CSO: 5100

## WORLDWIDE AFFAIRS

### ARGENTINE ATOMIC ENERGY PRESIDENT SEES CHANGE IN CANADIAN ATTITUDE

Buenos Aires CLARIN in Spanish 9 Aug 79 p 11 FY

[Excerpt] Santa Fe--Carlos Castro Madero, president of the National Atomic Energy Commission (CNEA), has said that "a change of attitude by the Canadian Government" toward Argentina regarding nuclear matters can be observed. He was referring to the Canadian offer to provide sensitive technology in the construction of a heavy water plant in Arroyito, Neuquen.

He added: "The transfer of this type of technology was linked to prior approval by the United States, but this situation has now changed. Therefore, a substantial change has taken place in this area."

The head of the CNEA made these remarks in this city during the inauguration of the new building where the Institute for Technological Development (INTEC) for the chemical industry will function under the jurisdiction of the National Scientific and Technological Research Council (CONICET) and the littoral national university, which are in charge of the preparation and supervision of the first national heavy water pilot plant which will function near Atucha.

Castro Madero also indicated that he is hopeful that before the end of this month, the executive branch will decide on the bid for the construction of the Atucha II nuclear plant. Two proposals have been presented for the construction of this project (which will be the third Argentine nuclear plant)--one German and one Canadian--which have important technical differences.

Basically the offer made by Siemens differs from the offer presented by the Canadian Government in the fuel and the moderator (heavy water), which in the Siemens model are enclosed within a 28-centimeter-thick pressure vessel that is technologically very difficult to build. The Canadians are offering a system of pressure tubes only 2.5 centimeters thick which is easier to build. Castro Madero said that the latter technology offers better conditions of adaptability to the specialized Argentine industry.

The CNEA president also indicated that during the last IAEA meeting Argentina objected to the new agreement between that organization and the United States--an agreement which involves our country--because it is against the IAEA statute. He said: "The final decision was to approve the agreement but on the condition that it would not remain as a precedent for future agreements with the member nations of the nuclear bloc."

Regarding bilateral relations in the nuclear field with the United States, Castro Madero added, in conclusion, that the two countries are currently discussing the terms of an agreement and hoped that this will be reached soon.

AUSTRALIA CONCERNED OVER NUCLEAR PROLIFERATION IN ASIA

Sydney THE SYDNEY MORNING HERALD in English 24 Jul '79 p 6

[Editorial: "Nuclear Shadow"]

[Text]

THE COLLAPSE of Mr Desai's Janata alliance, and the possibility that a new Indian Government will take a more aggressive stance on defence, have revived concern about nuclear rivalries on the subcontinent. Mr Desai's policy of total rejection of development of nuclear weapons has not been universally popular and there is no reason to believe that the next Indian Prime Minister — whoever he may be — will continue to subscribe to it without qualification. India's capacity to develop nuclear weapons is not in doubt: an Indian bomb has been possible since the underground test explosion of 1974. The dangerous new factor in the equation is the probability that India's neighbour, Pakistan, is developing its own nuclear capability.

Stories about a Pakistani or "Islamic" bomb — a weapon which Pakistan might be prepared to make available to the whole Islamic world, with incalculable consequences — have been circulating for some time. These reports have been categorically denied by the Pakistani Government. The Pakistani Embassy in Canberra, aware of Australian Government concern, has insisted that its country's nuclear program, including its research and development areas, is aimed at purely peaceful ends. The official stance is that Pakistan has no desire to achieve nuclear weapon capability, and has no intention of producing a nuclear bomb of its own, much less an Islamic bomb. Despite these denials, Western nations (including Australia) are coming increasingly to the view that Pakistan is developing a nuclear capability, and may be ready to test within two years.

Expert opinion is that the program is being pushed ahead, using components supplied by the United Kingdom, Belgium, West Germany, Switzerland and The Netherlands, along one of two routes: the enrichment of uranium to weapons grade, or reprocessing, to produce plutonium. The enrichment method is generally considered more suitable for less developed nations. Claims that Pakistan already has a hydrogen bomb, which it will make available to the Arab world, or that if it has not already a bomb it will be ready to test one before the end of this year, are generally discounted. But despite the closing of a number of loopholes by potential suppliers of components — Pakistan calls this "pressuring for political purposes" — the Government in Islamabad seems to be going ahead with a program which is causing unease to its neighbours, to the region, and to the world.

The danger with any sort of nuclear proliferation, however limited, is its chain reaction effect. India's nuclear program was undoubtedly set in motion by China's explosion of a nuclear bomb in 1964, only two years after the Sino-Indian war. Pakistan's nuclear ambitions, if such they are, have been spurred by its neighbour's atomic capabilities; and in turn, a new Indian Government might feel sufficiently alarmed by recent developments to re-think its own position on nuclear weapons. Australia, dedicated, as all sensible nations must be, to the principle of non-proliferation, can only regard with alarm the prospect of a new nuclear shadow across the region, and should be ready to make its position known.

## URANIUM CALLED KEY TO CLOSER AUSTRALIAN-EEC TIES

Brisbane THE COURIER-MAIL in English 18 Jul 79 p 5

[From Graham Clark in Brussels]

[Text] "SOMEONE has to drive the train."

That comment by a British-born European Economic Community official summed up the attitude of many Britons towards the Common Market.

Britain is in the market — and Britain should run the market.

The view is not shared by the other member states, and the view is not the official British Government view.

But to many Britons, that is the way it should be. And according to these same Britons Australia has a lot to thank the mother country for.

## Rush

The seemingly sudden rush by the Common Market for closer Australian ties after years of hostility and stone walling has come about because the European train now has a new driver, they point out.

Australia's vast supplies of uranium, being eyed closely by the energy-starved community, is not the prime reason why Australia now is in the community's good books.

Australia is British based, and even though it is on the wrong side of the world, the heritage counts.

the would-be Ex-straits drivers say.

But the fact remains — the Common Market now is courting Australia.

After years of knocking on closed doors, Australian Government Ministers are returning home with progress to report on meat and coal exports.

One top community spokesman said it was the start of the new "love-in", started after Commission vice-president Otav Gundelach visited Canberra in May to talk to Prime Minister Fraser.

After talks with the Government, Gundelach returned to Brussels to set up plans for closer Australian links.

"It's time to end the trench warfare and time for more peace talks," he said this week in his 11th floor office in the Brussels community headquarters.

The new peace moves involve the proposed setting up of a community delegation office in Canberra next year, staffed by trade experts eager to boost the community's share of Australia's raw material wealth, particularly uranium.

Community officials right up to Gundelach refuse to admit that they are trading better access for Australian goods for guaranteed supplies of uranium, and say Prime Minister Fraser's declaration of

"need for uranium" is not behind the moves for close links.

But the community is vitally concerned about what Australia does with its uranium wealth. Since the 1973 oil crisis, the community has been casting around for reliable alternative supplies of energy.

Reduced fuel quotas have slowed community steel production down 40-60 per cent capacity, and 100,000 jobs have been lost in the industry. The textile trade has lost 87,000 jobs, and shipbuilding 50,000 in 1978.

The community is promoting the renewed use of coal — more good news for Australia — and by 1990 aims to generate 75 per cent of its power through coal and nuclear sources.

The use of uranium will rise even more sharply in the next 10 years.

The community used 10,000 tonnes of uranium last year, will double that amount by 1985 and use 30,000 tonnes a year by 1990.

The recent Canadian uranium embargo joined Brussels' bureaucrats into seeking more supplies.

They get supplies from Niger, Namibia, South Africa and did get some from Canada — before the embargo.

# Jolt

The community has uranium resources of 120,000 tonnes, most of which is in France. But the Canadian jolt has forced the community to look further afield.

Australia is the obvious choice for the extra uranium needed, and has the added bonus of security and a relatively stable political climate.

The community's top uranium expert said Brussels was placing a great deal of importance on the Australian market to guarantee steady supplies.

The community expected Australia to have 6000 tonnes of uranium on "its" for Europe by 1985.

The spokesman said it had been a sellers' market 18 months ago, was now a buyers' market because demand had dropped sharply, and as the demand increased again the advantage would be back with the sellers.

This advantage for Australia also could guarantee the extra access needed for Australia to ensure a wider European beef market.

Australia already supplies 15 per cent of the 287,000 tonnes of coal used by the community each year, and this also will increase as European industry returns to coal burning practices to beat the oil crunch.

While European companies, notably German, invested heavily in Australia's extractive industries, the community had no intention of putting money into uranium exploration in Australia, the uranium chief said.

Australia had enough money of its own to look

Community officials admit Brussels does not have a firm policy on the growing jobless ranks now, and cannot afford many more setbacks to its industries.

Alternative energy sources will provide the key to the much needed stability for recovery.

Australia has this energy that Europe badly needs and this is reflected in the European move for closer links.

No matter who is driving the train, it still needs fuel.

for uranium, and the community would provide the added incentive of giving a ready market for the product.

The community would not try to guarantee supplies by participating in development of new fields in Australia.

But the spokesman stressed the community was anxious for Australia to pour more money into exploration to ensure a steady European supply.

He was confident Australia had several more undiscovered fields, and the fragile energy balance in Europe made the discovery of these fields vital.

The rocketing oil prices charged by Arab suppliers is the greatest single threat to economic recovery within the community, as it prepares to admit Greece next year, and negotiations with Portugal and Spain to make up an even dozen community states by the mid 1980s.

With unemployment running as high as 10 per cent in some E.E.C. countries further oil price jolts before the alternative energy sources can be brought fully onstream will prove disastrous.

BRIEFS

**KOREAN BIDS FOR NUCLEAR PLANT CONSTRUCTION**--Seoul, Aug 6 (HAPTONG)--The state-run Korea Electric Company (KEC) will send to about ten firms of six countries next month letters of invitation for bids in its purchases of nuclear reactors and turbine generators for the construction of Korea's ninth and tenth nuclear power plants, KEC officials said today. South Korea plans to build the two more nuclear power plants with a rated generating capacity of 900,000 kilowatts each at Ulchin, North Kyongsang Province, by September 1986 and by September 1987, respectively, the officials said. The KEC's invitation will be sent to about ten firms including Westinghouse Electric Corporation, Combustion Engineering and General Electric (GE) of the United States, General Electric Company of Britain, Framatom of France, Kraftwerk Union of West Germany and Mitsubishi Electric Corporation of Japan, the officials said. [Excerpts] [Seoul HAPTONG in English 0838 GMT 6 Aug 79 SK]

**FRG ACCOUNTABILITY FOR IRANIAN CANCELLATION**--Following the unilateral cancellation of the contract for the construction of the nuclear reactor in Bushehr by the German contractor, Fereydun Sahhabi, head of the Iranian Atomic Organization, said: With the cancellation of this contract the financial damage to Iran amounts to DM 5 billion. He said that the German Government should take measures to compensate the damages to Iran. [passage indistinct] [Text] [Tehran Domestic Service in Persian 0930 GMT 10 Aug 79 LD]

**ARGENTINE-CANADIAN NUCLEAR PLANT LOAN**--Buenos Aires, 31 Jul--The executive branch today issued a decree which approves an agreement between the National Atomic Energy Commission (CNEA) and the Canadian Export Development Corporation. This agreement is for a supplementary loan to finance the construction of the Embalse nuclear plant in the Province of Cordoba. [Buenos Aires TELAM in Spanish 2232 GMT 30 Jul 79 PY]

**NEW ZEALAND MINISTER ON FRENCH NUCLEAR TESTING**--Wellington, Aug 13 (AFP)--New Zealand's radiation laboratory has found no signs of nuclear venting into the atmosphere following France's underground nuclear test at Mururoa Atoll on July 26. Acting Prime Minister Brian Talboys told this to a press conference today. He said the laboratory's stations in Rarotonga Western Samoa, Fiji and Tonga had all reported no signs and the time for any venting to be detected has now passed. Mr Talboys added, "But the government accepts without a doubt that there was a nuclear explosion." The New Zealand Embassy in Paris had made inquiries but the French Government would not confirm or deny an explosion had occurred. The embassy was referred to the French Atomic Energy Commission which said the shock wave from a nuclear test could not have caused a tidal wave of the type which hit the atoll. [Text] [Hong Kong AFP in English 0914 GMT 13 Aug 79 OW]

**WEST GERMAN, MEXICAN OIL NEGOTIATIONS**--Mexico City--FRG firms are currently negotiating with Mexico on the annual purchase of 3 to 5 million tons of petroleum. This was announced by Federal Economics Minister Otto Graf Lambsdorff today at the conclusion of his 5-day official visit to Mexico City. Furthermore, Mexico is "basically" interested in cooperation in the field of nuclear technology. However, this is not yet a topical issue, according to Lambsdorff. Lambsdorff added that Bonn will welcome agreements on oil deliveries coming into being. But he also knew that such deliveries would not be possible before 1981-82. With regard to the transfer of know-how in nuclear technology, the minister stated that the Federal Republic is interested and prepared to do this. However, the Mexicans still have several years to go in developing their powerplants. The country is at present constructing its first two powerplants in Laguna Verde in the State of Veracruz. It recently concluded a cooperation agreement with France in the field of nuclear technology. The required uranium is enriched in the United States. [Excerpt] [Hamburg DPA in German 1811 GMT 13 Aug 79 LD]

**URANIUM MINING**--Seoul, 22 Aug (HAPTONG)--The state-run Korea Electric Company (KEC) will promote a joint venture with a French business firm next month to develop uranium in Gabon and other African countries for re-imports into Korea, it was learned at the Energy-Resources Ministry Tuesday. Negotiations are now under way between the Korean and French partners on the joint uranium development project in Gabon and other resources-rich countries in Africa, ministry sources said. The KEC is also pushing ahead with its plan to develop uranium in Paraguay in an effort to secure a sufficient supply of uranium needed for nuclear power plants to be built in the years to come, the sources said. A number of Korean private enterprises are considering developing uranium in Australia, Canada, Paraguay, Gabon and other uranium-producing countries, the sources said. At present, Korea's annual demand for uranium is estimated at 100 tons, but the figure will increase to about 1,000 tons in 1986 with the construction of new nuclear power plants, the sources added. [Seoul HAPTONG in English 0116 GMT 22 Aug 79 SK]

## INTER-ASIAN AFFAIRS

### JAPANESE CONSORTIUM AUTHORIZED TO NEGOTIATE AUSTRALIAN URANIUM DEAL

Tokyo KYODO in English 0456 GMT 14 Aug 79 OW

[Text] Tokyo, Aug 14 KYODO--Japan has accepted, in principle, the request by the Australian Government for investment in Australia's largest uranium ore mine, the NIHON KEIZAI SHIMBUN, an economic daily, reports. The report said the Ministry of International Trade and Industry has given a "go-ahead" to a plan for a Japanese consortium to negotiate with the Australian Department of Trade and National Resources over the terms of investment.

According to the article, the MITI pledged active support for the consortium in coming negotiations when it met Monday with Shoichiro Kobayashi, president of Kansai Electric Power Co, which will be the leader of the group. The uranium ore mine--the Ranger Mine--is in Northern Territory, northern Australia. The mine is estimated to have an uranium ore reserve totaling 100,350 tons, in terms of natural uranium oxide. The mine is owned 25 percent each by Electrolytic Zinc and Peko-Wallsend and 50 percent by the federal government.

According to the report, Australian Deputy Prime Minister John Douglas Anthony, who also heads the Department of Trade and National Resources, decided to sell all its 50 percent interest to both Australian and foreign investors. The Australian department strongly asked the MITI and Japanese electric power industry in late July for cooperation in the development of the mine. The MITI thinks that the Japanese group's acquisition of a 25 percent stake in the mine is appropriate. The Japanese consortium is likely to be made up of Kansai Electric Power Co., Kyushu Electric Power Co., Shikoku Electric Power Co. and C. Itoh and Co., the report said.

CSO: 5100

## INTER-ASIAN AFFAIRS

### TWENTY-FOUR GROUPS EXPRESS INTEREST IN RANGER URANIUM PROJECT

Hong Kong AFP in English 0303 GMT 15 Aug 79 OW

[Excerpts] Canberra, Aug 1 (AFP)--24 groups have so far expressed interest in buying the Australian Government's 50 percent shareholding in the Ranger uranium deposit in the Northern Territory, according to government officials here. A senior official told AFP today that when all interested groups had submitted firm proposals, the government would then decide whether or not to accept any offers. The official said there seemed to be "some misunderstanding" in Japanese circles about the Australian Government's position following a report in the economic daily Nihon Keizai yesterday that Japan had accepted in principle an Australian request to take part in the development of Ranger. "There has been no formal proposal from Japan so far" [word indistinct] said, "but we have heard along the grapevine that a consortium of Japanese companies may be interested". The deputy prime minister and minister for trade and resources, Mr Douglas Anthony, has put a minimum price of 240 million Australian dollars on the government's interest in Ranger, which is the amount the government must contribute to the project's development costs if it retains its holding. [sentence as received]

Heading the local interest is the publicly declared intention of the two private-sector Ranger partners--EZ Industries and Peko Wallsend-- to form an Australian consortium to buy out the government's half share. But they are doing it under protest. They argued that the 50 percent interest was originally expropriated in 1975 by the then Labor government and should be handed back for the 20 million Australian dollars the government had already contributed to the capital costs. A deadline of September 30 has been set for the lodging of firm offers.

CSO: 5100

## INTER-ASIAN AFFAIRS

### BRIEFS

JAPAN, ROK NUCLEAR INDUSTRY COOPERATION--Seoul, Aug 15 KYODO--Korea and Japan are expected to step up their technological cooperation in the nuclear industry field. Korean government sources said Wednesday that major topics of the sixth Korean-Japanese Science-Technology Ministers Conference slated to open in Seoul September 12-15 will center around the safety operation of nuclear power plants, exchange of technological information about the nuclear industry, recycling of nuclear fuel and development of high-speed atomic reactors. Discussions of the bilateral cooperation in the nuclear industry are in line with an agreement reached at the fifth Korean-Japanese science-technology ministers meeting held last year in Seoul, according to the sources. Japanese Science-Technology Minister Iwazo Kaneko will lead a 10-member delegation to the meeting. [Text] [Tokyo KYODO in English 0210 GMT 15 Aug 79 OW]

ALLEGED SABOTAGE OF PAKISTAN NUCLEAR PROGRAM--An official spokesman in New Delhi has described as completely without substance press reports that India had been approached to sabotage Pakistan's nuclear program. He said the idea was never put to India by anybody, nor did it cross anyone's mind in the government. [Text] [Delhi Domestic Service in English 1530 GMT 16 Aug 79 BK]

CSO: 5100

## AUSTRALIA

### U.S. BASE AT NURRUNGAR ALLEGED TO BE PRIME NUCLEAR TARGET

Canberra THE AUSTRALIAN in English 10 Jul 79 p 2

[Article by Ted Knez]

[Text]

SINCE the S.A.L.T. II agreement last month, Americans have learned that almost everybody in the U.S. lives in or near target zones for Soviet nuclear missiles.

But Australians can only guess and are unsure whether any targets exist here, according to South Australian A.L.P. Senate candidate, Mr Grahame Maguire.

There are 68 target zones scattered across the U.S. and more facts about the nature of the targets and the strength of American and Soviet nuclear fire power are expected to come out of this week's U.S. Senate debate on ratification of S.A.L.T. II.

Mr Maguire believes the "secret" U.S. base at Nurrungar in South Australia's Woomera restricted area could become a prime target in the event of nuclear war between the U.S. and the Soviet Union.

He said yesterday he had written to the Prime Minister, Mr Fraser, and the U.S. Secretary of State, Mr Vance, asking them to disclose the nature of the installation.

Mr Maguire said the Federal Government had kept South Australians in the dark about the Nurrungar base.

"The public has been told little about Nurrungar except that it is vital to U.S. defence interests," he said.

Recent newspaper and journal reports using U.S. information indicate that Nurrungar, only 40km north-west of Adelaide, is one of only two ground stations for the U.S. satellite early warning system against nuclear attack. The other is in Colorado, U.S.

"It has been reported that satellites positioned in a stationary orbit over the Soviet Union can pick up the flare of missile launches with their infra-red detectors and transmit this information instantly via Nurrungar to the Pentagon," Mr Maguire said.

Mr Maguire said the strategic significance of Nurrungar had recently been heightened with the loss of U.S. bases in Iran.

"Yet very little information has ever been provided to the Australian public about Nurrungar and few South Australians realise that there are about 500 Americans living in the Woomera area," he said.

"Experts in strategic studies argue that the function of Nurrungar now includes support for offensive as distinct from defensive activities. Quite simply, all this means that Nurrungar could be a prime target in any nuclear exchange.

"I believe it is essential that the public should be told much more about the purpose and role of foreign bases in Australia," he said.

## AUSTRALIA

### DEBATE ON BUILDING OF NUCLEAR POWER STATIONS CONTINUES

#### South Australian ALP Leader

Sydney THE SYDNEY MORNING HERALD in English 6 Jul 79 p 10

[Text]

LONDON, Thursday. — The nuclear power industry has "blundered" in not properly explaining itself to the public, according to the South Australian Opposition Leader, Mr D. Tonkin.

He was speaking after touring Europe for a month and visiting power stations using a variety of energy sources.

"There has been a communication breakdown which the nuclear industry must rectify," he said. "It is a fear of the unknown which has resulted in many people adopting an anti-nuclear stance. The public now want to hear the facts, not fiction, and they deserve to have those facts."

Mr Tonkin said it was not generally known that the safety record of nuclear power generation was the best of any modern technology and high-level waste disposal was one of the safest aspects of the complete nuclear cycle.

"The process known as vitrification (preparation for storage) has been known to the British for 20 years," he said. "It is now simply a matter of deciding the locations of the many stable geological formations where vitrified waste can best be stored."

"The amount of high-level waste from the nuclear power process is also relatively small. There is not the mountain of highly radioactive waste than many people envisage."

#### West Australian ALP Leader

Perth THE WEST AUSTRALIAN in English 9 Jul 79 p 13

[Text] The Collie coalfields were WA's best defence against the risk of nuclear-power generation in WA, the Leader of the Opposition, Mr Davies, said on Saturday.

Nuclear Power was unnecessary for this State as well as being too costly and too dangerous, he said.

Mr Davies was speaking during a three-day visit to Collie.

He said that the Court government seemed determined to rush into nuclear power regardless of need, cost or safety.

"This determination shows scant regard for the future of Collie and its people or for the future of the State," he said.

"Nuclear-power generation cannot be justified on the grounds of cost, safety or need.

"The costs of establishing a nuclear power station are enormously high and much greater than the establishment cost of a conventional power station.

#### CHARGES

"WA already has the highest electricity charges in Australia because of the shortsightedness in past years of the Brand and Court governments."

Mr Davies said that despite plenty of advice and in defiance of international trends, the Brand government had built the Kwinana power station solely as an oil-burner instead of a dual oil and coal-burner.

Now, at a cost of about \$40 million, it was being converted to burn coal.

The Court government had delayed the implementation of the Tonkin government's decision to extend the Muja power station and extension costs had skyrocketed.

"This mismanagement and incompetence pushed up the price of electricity

and now the Liberals want to saddle us with the huge expense of a nuclear power station," Mr Davies said.

#### SUPPLIES

"We cannot see the need when there are still big proved supplies of coal at Collie.

"But the biggest argument against nuclear power is the risk. No one can give a complete guarantee that a nuclear power station will be safe.

"There is some risk involved in every form of power generation, but the consequences of an accident in a conventional power station will be small enough to make the risk acceptable.

"The consequences of an accident in a nuclear power station are so enormous as to make the risk unacceptably high.

"Before any decision is made to undertake the enormous capital investment involved in establishing nuclear power stations or to gamble with the State's safety, the very least that should be done is to begin more research programmes in the Collie basin to see whether the already big proved coal reserves can be increased.

"Such a programme would cost a few hundred thousand dollars and could save millions."

### Nuclear Scientist: Build Now

Canberra THE AUSTRALIAN in English 9 Jul 79 p 3

[Article by Erol Simper]

[Text] One of Australia's most distinguished scientists has warned that we should be looking to nuclear power to solve even our medium-term energy needs.

Sir Philip Baxter, a former chairman of the Australian Atomic Energy Commission, said in Sydney yesterday the Federal Government should build a \$1000 million, 1000-megawatt "fast-breeder" nuclear reactor at Jervis Bay in NSW to come on line by 1988.

To pay for it the Government should sell the electricity produced at the plant to NSW and Victoria.

Sir Philip was commenting, at the request of *The Australian*, on the general energy situation.

He also advocated that between \$3000 and \$4000 million be spent on plants to extract oil from coal.

He said Australia could be completely self-sufficient in energy by 1990 using a combination of oil, oil-from-coal, and nuclear-generated electricity.

But he warned that the present energy situation was "balanced on a knife edge" with "the Government not doing anything much about it."

He said: "It's giving a few thousand dollars here for wind power research and a few thousand there for solar energy — but these things are not going to make any appreciable difference to our energy situation over the next 30 years or so."

Upward of \$3000 million should be given to extracting petrol from coal.

"This would be the initial outlay, giving us something we can build on and gradually expand as the need arises," he said.

"By a combination of what oil we have, nuclear electricity and petrol from coal, we could be self-sufficient by 1990.

"All the technology we need is already at our disposal. I was making petrol from coal in England as far back as 1928. It was my first job. South Africa is now doing it on a big scale.

"All that is needed is a politician who can see that the oil will run dry by the turn of the century and to get on and do something about it."

Australia's coal deposits were such that the nation could become self-sufficient in liquid fuel through coal-to-petrol conversion alone.

"But not too many people realise this would necessitate a tremendous expansion — possibly a \$50,000-600,000 million industry — in coal mining, to something like three times the industry's present size," he said. "And I am not sure this is all that desirable.

"A great many people wouldn't see coal mining as the ideal way to make a living while there is, of course, a certain amount of pollution attached to burning fossil fuel.

"That's partly why we should supplement the electricity supply with nuclear fuel, which is non-pollutant."

Sir Philip said Jervis Bay was the ideal site for what would be Australia's first commercial reactor. It was part of the A.C.T. and, as such, was owned by the Federal Government.

It had excellent cooling-water facilities and many other advantages.

Fuelling the plant would not be a problem because Australia had an abundance of uranium.

## AUSTRALIA

### FEDERAL GOVERNMENT CHANGES RULES ON URANIUM EXPORT

#### Foreign Minister's Announcement

Brisbane THE COURIER-MAIL in English 19 Jul 79 p 3

[Text]

**CANBERRA.** — The Federal Government will allow uranium to be exported without requiring that Australian ownership be retained until it is converted to a suitable fuel fabrication or enrichment.

The Foreign Minister (Mr. Pincook) announced the change in policy yesterday.

Mr. Pincook stressed that the change did not signify a watering down of the Government's nuclear safeguards policy. It was designed to protect Australian uranium from possible seizure as a result of an anti-trust ruling brought by the United States company Westinghouse.

Under the previous policy, Australia kept ownership of yellowcake until it had been converted to hexafluoride — the point in the fuel cycle when international atomic energy safeguards apply.

But Mr. Pincook said since the policy was announced in May 1977, a number of practical difficulties had arisen, mainly from the Westinghouse anti-trust suit.

Westinghouse had sought US\$7000 million damages from four Australian companies claiming they were part of an international cartel formed to maintain high prices for yellowcake.

The U.S. judgments were made in favour of Westinghouse, but the Australian Attorney-General (Senator Durack), said last month the rulings would not be recognised in Australia.

Mr. Pincook said the ruling meant that the requirement that Australian uranium remain in Australian ownership would have placed shipments of uranium overseas by those companies at risk of seizure in execution of the judgment.

In ADELAIDE, the Australian Labor Party national conference decided yesterday that establishment of a uranium enrichment plant in Australia would be prohibited under a Federal Labor Government.

The Fraser Government is engaged in feasibility studies with the Japanese for establishing an enrichment plant in Australia.

## Criticism from Opposition

Melbourne THE AGE in English 20 Jul 79 p 14

[Text]

CANBERRA. — The Federal Opposition has criticised modifications of the Government's nuclear safeguards policy.

The deputy Opposition Leader, Mr. Bowen, said yesterday the Government had abdicated its responsibility for the policy.

The Foreign Minister, Mr. Peacock, said on Wednesday the Government would allow the export of uranium without a requirement that Australian ownership be retained until conversion for fuel fabrication or enrichment.

Mr. Peacock denied the Government was watering down its nuclear safeguards policy. He said the change was needed largely because of the Westinghouse anti-trust case in America.

US court decisions, which had gone against four Australian companies, meant that exports by those companies could have been seized to recover damages

claimed by the Westinghouse Electric Corporation.

The companies are Conzinc Riotinto of Australia, Mary Kathleen Uranium, Pancontinental Mining and Queensland Mines.

Mr. Bowen said the Government's policy — handing uranium over to private and foreign commercial interests — had not been caused by the Westinghouse case.

The Government had taken two years to deal with this "obvious hole" in its policy, but had only widened rather than closed the hole.

He said the Government should have acted to acquire uranium and reach more effective arrangements to control its upgrading, and set standards for security, safety and waste disposal.

"My inquiries overseas have indicated that the Australian bilateral safeguards agreements are widely regarded as cumbersome and unworkable."

AUSTRALIA

ORDINANCE LIMITING URANIUM MINE OWNERSHIP REPEALED

Sydney THE SYDNEY MORNING HERALD in English 23 Jul 79 p 4

[Text]

CANBERRA.— The Government has decided to repeal the Companies Act (Uranium Mining Companies) ordinance which limits foreign shareholding in the Nabarlek uranium deposits.

The Minister for Business and Consumer Affairs, Mr Fife, said yesterday the ordinance, made in 1970, imposes limits on foreign shareholdings in two companies, Kathleen Investments (Australia) Limited and Queensland Mines Ltd.

Since the ordinance was made Parliament had enacted the Foreign Takeovers Act 1975, which enabled the Government to prohibit foreign takeovers against the national interest.

• He said both companies wished the ordinance to be withdrawn and that the Government had decided it was no longer appropriate to have special legislation applicable to two companies only.

**SOUTH AUSTRALIAN URANIUM POLICY DRAWS CRITICISM**

**Premier Orders Freeze**

Canberra THE AUSTRALIAN in English 18 Jul 79 p 5

[Feature page: "The A.L.P. Conference"]

[Excerpt]

**THE South Australian Government will freeze further development of uranium resources until the standard of international safeguards is substantially lifted.**

The Premier, Mr Corcoran, told yesterday's A.L.P. national conference he did not believe safeguard arrangements were anywhere near a satisfactory level.

He said the Leader of the Opposition in South Australia, Dr Tonkin, who recently advocated increased exploitation of uranium in the State, had been "dazzled by the glitter of fools' gold."

**SCALED DOWN**

"He is prepared to ignore the problems of proliferation, diversion, reactor safety, waste disposal and the projected demand for power stations which has scaled down dramatically in recent years," Mr Corcoran said.

He said South Australia would not permit the exploitation of uranium until the Government could assure the people that mining and treatment of uranium for shipment to a foreign country were safe.

### Bank Director's Criticism

Melbourne THE AGE in English 19 Jul 79 p 18

[Text]

Sir Robert Norman, a director of the Bank of New South Wales, sees little logic in South Australia refusing to allow uranium mining.

He told the Adelaide Chamber of Commerce this yesterday.

Sir Robert said Japan and other industrialised countries were demanding uranium which was becoming more readily available worldwide.

His remarks appeared to refer largely to South Australia's richest energy prospect, the Western Mining Royby Downs copper/uranium find.

"I know that arguments about the pros and cons of uranium mining are enormously complex," Sir Robert said.

"But most industrialised countries will have to increase their nuclear power energy.

"If economic growth is to be resumed and a replacement to oil has to be sought for generating electricity, the short term options are narrow. Imaginative proposals like solar power are very much a long term proposition."

CSO: 5100

## WEST AUSTRALIAN UNION REVERSES STAND ON URANIUM MINING

Perth THE WEST AUSTRALIAN in English 11 Jul 79 p 11

[Text] Kalgoorlie: Members of one of WA's strongest unions have voted in favour of the mining and treatment of uranium.

A survey last year by the Federated Engine Drivers and Fitters' union resulted in a majority of members supporting the union's involvement in uranium mining.

Results of the survey, which was completed about 12 months ago, had not been made public.

The FEDFU previously supported the line adopted by the WA Trades and Labor Council in opposing the development of uranium deposits such as the one at Yeelirrie.

### BOUND

But the secretary of the Kambalda sub-branch of the FEDFU, Mr Grenville Seaward, said yesterday that the postal survey bound the union executive to support the mining and treatment of uranium.

The decision to hold the survey was made at the union's annual State conference in March last year.

Mr Seaward had suggested that a survey of FEDFU members' views on the controversial issue of uranium be conducted.

### MAJORITY

Mr Seaward said yesterday that a big percentage

of survey forms were completed and returned, with a majority voting in favour of union participation of the development of uranium projects.

He said that when the survey was conducted uranium was a "hot topic" in the community and was being widely debated.

"I would have liked the figures from the survey to have been released," he said.

The question of the survey results was raised at a meeting of Goldfields unionists in the Boulder Town Hall last weekend.

The meeting was called to discuss union involvement in the Western Mining Corporation's Yeelirrie uranium project and the proposed metallurgical treatment plant.

The 50 unionists present gave conditional support to the building of the plant near Kalgoorlie.

WMC would need the support of the FEDFU for the project because power will have to be supplied to Yeelirrie and the treatment plant.

## AUSTRALIA

### MINING EXECUTIVE HOPEFUL ABOUT URANIUM MARKET

Perth THE WEST AUSTRALIAN in English 11 Jul 79 p 37

[Text] London, Tues: Australia is admirably suited to capture a significant share of the world uranium market, according to the Pancontinental Mining chairman, Mr Tony Grey.

Mr Grey, whose company is the majority owner of the yet to be developed Jabaluka deposit in the Northern Territory, was speaking to a group of mining analysts.

The Financial Times said that Mr Grey's faith in the uranium future was expressed at a time of widespread concern in London that delays in development of the Australian industry had allowed other countries a competitive advantage.

Mr Grey argued that Australia was still well placed as a potential supplier and said that electricity utilities would have to rely on nuclear power to build their generating capacity.

"This need is expected to increase very rapidly in the latter part of the decade," he said.

#### IN ADVANCE

Because of the massive capital investment required for reactors, the utilities must secure their supplies well in advance of their actual requirements, he said.

They had embarked on an inventory policy which had the effect of bringing forward their uranium requirements.

In addition, the utilities had adopted a policy of diversifying their sources of supply and looked to domestic producers who could more readily sustain adverse market conditions.

The Financial Times mining correspondent said that output in quantity from the Jabaluka deposit remained some years away—far enough to hit the market in the future, if Mr Grey's analysis was correct.—AAP.

# IMPACT STUDY ON JABILUKA URANIUM PROJECT ISSUED

## Mine To Be Underground

Melbourne THE AGE in English 14 Jul 79 p 25

[Text]

Pancontinental Mining's final environmental impact study on the Jabiluka uranium project in the Northern Territory confirms reports that the mine will be underground.

The company has bowed to government and public objections to the original open-cup plan.

The switch to underground mining first became apparent during an Arbitration Commission hearing last April on wages and conditions for workers on the project.

Production rate of an initial 3000 tonnes annually increasing to 5000 tonnes by the fifth year of operation will be maintained under the new plan.

The mine will have an estimated production life of 27 years, including the output of 12000 kg. of gold in 10 years.

Pancontinental lists several advantages of the new plan.

The study says the underground mine will reduce the size of the operation by avoiding the need to strip waste rock.

There will also be a "major decrease" in the disturbance of land and the elimination of waste dumps.

The ore treatment plant and tailings pond will now be located further from Aboriginal sites.

Mining will not start until at least mid-1982.

The lag will be caused by plant construction, including an under-

ground crushing station, an ore treatment plant and a pollution-free tailings pond.

Construction will employ 1000 workers, to be housed at Haden. Flats in a camp which will be dismantled after their jobs are completed.

The planned 725 operations employees will live at the planned Jabiluka township in fully air-conditioned houses built by the company.

The chairman of the Jabiluka Town Development Authority, Mr. Ted Simpson, said yesterday construction of Jabiluka would begin on Monday — the latest work could begin to ensure it was completed before the wet season.

Contracts worth \$4.5 million were approved last month for road works and construction of a camp to house the 600 men who will build the town.

When mining is completed, the mine will be sealed, plant removed and landscaping and revegetation undertaken.

The tailings pond will be covered with three metres of low-permeability material and original overburden.

The preparation of the environmental impact study is the first step towards securing all necessary approvals for a go-ahead in development. Among these is an agreement with the Northern Lands Council on compensation to Aboriginal land owners around the Jabiluka site.

## Impact on Aborigines

Melbourne THE AGE in English 14 Jul 79 p 4

[Article by Stephen Mills]

[Text]

**CANBERRA. — Pancontinental, potentially Australia's biggest uranium miner, has conceded that mining in Arnhem Land will have significant social impacts on Aborigines.**

The company says mining will increase pressures on Aboriginal patterns of social organisation and belief systems.

In its environmental impact statement, handed to the Government yesterday, Pancontinental predicts that the speed of social change will in itself compound the effects on Aboriginal society and culture.

The report makes far greater admissions about the impact of mining on local populations than the slender draft statement issued in December 1977.

That report restricted itself to the hope that most direct social contact "will aid mutual understanding between the Aboriginal and European communities".

The company proposes consultation, site recording and health monitoring, to minimise damage to Aboriginal communities.

"The reality is that the impacts both positive and negative which will arise from the development of uranium mining in the region will be woven throughout the fabric that is represented by the relationships forged between the region, its people and the activities they engage in," the report says.

News of mining has already created widespread expectations of major social change.

Visits by Government officials, anticipation of mining and royalty payments and concern over the influx of European visitors has unsettled the Aboriginal communities.

Tourism will increase, partly in response to mining and mining communities, and this will increase pressures on the nearby Kakadu National Park.

To protect the natural environment, Pancontinental proposes revegetation, soil conservation, noise suppression, dust control and sophisticated measures against seepage from the tailings pond.

The mine will disturb only 11 square kilometres, with vegetation being removed from about eight square kilometres.

The project will release airborne contaminants in the forms of dust and radionuclides from mining, crushing and yellowcake packaging and sulphur dioxide from sulphuric acid production.

But measures to minimise these would reduce their effect to insignificance.

Radon emissions from the tailings pond will be controlled by a water cover, while the pond itself will have earth fill embankments of low permeability.

All run-off waters will be collected and reused, involving an extensive water management system.

This includes collecting all run-off from "contaminated catchment areas" and redirecting it to sumps and ponds which will be sealed to prevent seepage.

## URANIUM MINING STANDARDS SAID TO MINIMIZE HEALTH RISK

Canberra THE AUSTRALIAN in English 10 Jul 79 p 6

[Letter to the editor, from G. M. Watson, formerly Chief, Environment and Public Health Division, Australian Atomic Energy Commission]

[Text]

RECENTLY newspapers and other news media have given prominence to two stories about underground uranium miners which may give quite misleading impressions about the actual degree of risk which attaches to uranium mining.

The first of these originates in statements made to a U.S. Senate Subcommittee on June 13. Newspaper reports have put these out of context saying, for example:

"Uranium miners stand at least 4 times the risk of dying from lung cancer as average white Americans"; "Government officials knew of serious cancer risks to uranium miners in the 1940s and 1950s but took no action"; "We now clearly have a public health problem and epidemic of monumental proportions on our hands."

It has not been pointed out that the figures given to the Senate Subcommittee refer only to underground miners exposed between about 1948 and 1964. In this period

the standards and controls later to be required for U.S. mines had not yet been adopted, and many of the mines had little ventilation or even none.

The exposures received by many of these underground miners were not "low level" as stated in one report but were quite high and much greater than the limits now imposed in both the U.S. and Australia.

The present limits are, in fact, based on the experience in the American underground mines and set at levels which are not expected to affect the incidence of lung cancer.

It is unfortunately the case that 6 or 7 per cent of Australian males will die of lung cancer, associated with their smoking habits, whether or not they work in mines. The quoted statement of a fourfold increase in risk has no relation to present conditions, and any lung cancer epidemic from underground uranium mining is a legacy of past conditions which will not be repeated.

Australian mines presently being developed are open cut where the problems are much lower than for underground mines.

The second misleading story comes from South Australia, where it has been said that 68.9 per cent of deaths in Radium Hill miners who worked underground for more than 13 months was attributable to cancer, the inference being that their occupation was responsible for an excess.

It may be the case that there is an excess of cancer in the Radium Hill miners, but in the absence of data on age and sociological factors no positive statement can be made.

In any case, as with the U.S. underground miners, it is not legitimate to infer that excess cancer will be present in miners operating under our present standards.

## AUSTRALIA

### BRIEFS

**PILBARA URANIUM SEARCH**--The Ashburton Landstat joint-venture partners have entered an agreement with Getty Oil Development Co to jointly explore for uranium in the Pilbara. Ashburton's operator, Australian Consolidated Minerals Ltd, will generate target zones with potential for uraniferous calcretes using the Landstat data processing system. The agreement provides for the Ashburton partners to contribute 24.6 per cent of the total project expenditure up to \$1 million to retain a 40 per cent interest and Getty Oil will earn a 60 per cent interest by providing the rest of the expenditure. The Ashburton partners are ACM, with 32.5 per cent, and Command Minerals NL, Nickelore NL and West Coast Holdings Ltd each with 22.5 per cent. [Text] [Perth THE WEST AUSTRALIAN in English 5 Jul 79 p 50]

**URANIUM AT KALGOORLIE**--Japanese experts today confirmed the existence of promising uranium deposits in Western Australia and in British Columbia, Canada. A spokesman for the Power Reactor and Nuclear Fuel Development Corporation (PNC) said the corporation's Australian subsidiary has discovered uranium deposits at Kalgoorlie, WA. The spokesman did not comment on the size of the deposit. He said the ore was found in two districts and was considered relatively high, at 1 to 2 per cent. The discovery was made by PNC Exploration (Australian) Pty. Ltd. The spokesman said detailed surveys, including more borings, would be needed before any decision could be made on whether to proceed with development. [Excerpt] [Melbourne THE AGE in English 5 Jul 79 p 17]

**URANIUM IN NORTHERN TERRITORY**--Although bauxite, manganese, gold and copper mining are currently the major employers in the Northern Territory, it is uranium that attracts the most public attention. Queensland Mines' rich uranium deposit at Nabarlek is expected to be mined and stockpiled this year. The company will use open-cut methods to mine almost half-a-million tonnes of uranium ore and 2.3 million tonnes of rock to recover the estimate 9000 tonnes of uranium oxide (yellowcake). It will produce concentrate at the rate of 1080 tonnes a year for eight to 10 years. Nabarlek is the smallest of four known major uranium deposits in the South Alligator River area in Arnhem Land, about 250 kms east of Darwin. Ranger-Jabiluka, discovered by Geopeko, Ltd, has an estimated 100,700 tonnes of uranium oxide. Discovered by Pancontinental Minerals Ltd, Jabiluka has two ore bodies with 207,000 tonnes of uranium oxide

and a significant quantity of gold. Koongarra, discovered by Noranda Australia Ltd, has reported reserves of 24,000 tonnes of yellowcake. [Excerpt] [Canberra THE AUSTRALIAN in English 29 Jun 79, supp., p 8]

NABARLEK WORK RESUMES--Darwin: Construction work at the Queensland Mines uranium site at Nabarlek, in Arnhem Land, has resumed after an eight-day strike. The Miscellaneous Workers' Union said that a dispute over wages and conditions had been settled after meetings with the management. [Text] [Perth THE WEST AUSTRALIAN in English 17 Jul 79 p 19]

LUCAS HEIGHTS QUERY--Sutherland Shire Council will ask the Federal Government to consult it about any future extensions to the Atomic Energy Commission's research establishment at Lucas Heights. The shire president, Councillor Jean Manuel, said yesterday that since recent reports of accidents at nuclear reactors overseas, some councillors had become concerned about possible danger to the increasing residential population at Menai, near Lucas Heights. At its last meeting, the council decided to ask the Minister for National Development, Mr Newman, to meet a deputation from the council, and to ask to be consulted on future developments at the research establishment. [Text] [Sydney THE SYDNEY MORNING HERALD in English 23 Jul 79 p 2]

CSO: 5100

## BRIEFS

**REQUEST FOR ENRICHED URANIUM**--India has applied for a fresh shipment of 19.8 tonnes of enriched uranium for the Tarapore atomic powerplant. India's earlier request for shipment of equal quantity is still pending with the U.S. Nuclear Regulatory Commission. [Text] [Delhi Domestic Service in English 0240 GMT 31 Aug 79 BK]

**JANATA CRITICISM OF NUCLEAR POLICY REMARKS**--The leader of the opposition in the Lok Sabha, Mr Jagjivan Ram, has said that Prime Minister Charan Singh's remarks regarding the country's nuclear policy are a clear deviation from the hitherto accepted policy of the nation on the subject. Speaking to newsmen in New Delhi today, Mr Jagjivan Ram said that we stick to our policy that we will carry on research and development of nuclear power for peaceful purposes only. He said Mr Vajpayee's approach in this regard was the correct one. Janata Party President Chandra Shekhar has said the prime minister's speech from the Red Fort yesterday has raised many controversies and its contents are unbecoming for such an occasion, coming from the highest executive of the nation. Speaking to newsmen in New Delhi today, Mr Chandra Shekhar expressed the view that the prime minister's address to the nation was sounding like campaigning for survival. He said the Janata Party dissociates itself from the prime minister's address to the nation as in its opinion Mr Charan Singh's remarks on accepted national policies may cause misgivings to friendly nations. [Text] [Delhi Domestic Service in English 1530 GMT 16 Aug 79 BK]

**EXPLOSIVES PRODUCTION**--India is one of the few countries in the world which has the knowhow to produce HMX--the most powerful explosive so far known to the world. HMX, or Her Majesty's explosive, is a British invention and India has succeeded in producing it through indigenously developed technology. HMX is used in warheads of sophisticated missiles and rockets and has far greater destructive powers than other types of explosives now in use. HMX is produced in a pilot plant located on the complex of the Explosive Research and Development Laboratory wing of the Defence Research and Development Organisation in Pashan near Pune. [Delhi ISI Diplomatic Information Service in English 1442 GMT 2 Aug 79 BK]

**NUCLEAR POWER STATION**--One more nuclear power station with 2 units of 235 Mw capacity each is to be set up in the country. The location of the power station will be finalized by the end of this year. This was disclosed by the chairman of the Atomic Energy Commission Dr Setlwa in Bombay. He said more heavy water plants are planned in the country because they are essential to meet the requirements of the nuclear power program. [Delhi Domestic Service in English 0830 GMT 2 Aug 79 BK]

**EIGHTEEN NUCLEAR POWER UNITS TO BE CONSTRUCTED BY 1991**

Seoul MAEIL KYONGJE SINMUN in Korean 6 Aug 79 p 1

[Seoul U.S. Embassy Translation]

[Excerpts] The government has finalized its plan to construct a total of 18 nuclear power units by 1991, according to a long-term electric power resources development plan revealed 6 August. Under the plan, emphasis will be shifted from oil-fueled power generation to nuclear power.

In addition to the nine nuclear units on which plans have been finalized to date, the plan calls for construction of nine more nuclear units between 1987 and 1991.

The nation's power demand has been growing between 1.5 million kilowatts and 2 million kilowatts annually. The government plans to meet most of the increasing power demand with nuclear power generation. To this end, it plans to raise the nuclear power ratio from the present 8.5 percent to 30.6 percent by 1986 and again to 43 percent by 1991.

According to the power resources development plan finalized for the years up to 1986, the total power generating capacity is projected at 29,936,000 kilowatts. By energy source, the total generating capacity breaks down as follows:

1) Hydroelectric power, 2,695,000 kilowatts accounting for 12.9 percent of the total; 2) coal-fueled power, 3,187,000 kilowatts for 15.5 percent; 3) oil-fueled power, 8,638,000 kilowatts for 41.3 percent; and 4) nuclear power, 6,416,000 kilowatts for 30.6 percent.

By 1991, the nuclear power generating ratio is projected to increase to 43 percent, while reducing the oil-fueled power ratio from the present 41.3 percent to around 30 percent.

CSO: 5100

**CEMA COUNTRIES' COPING WITH FUEL, ENERGY NEEDS HIGHLIGHTED**

**Moscow Radio in Romanian to Romania 1600 GMT 14 Aug 79 LD**

[Text] As announced recently by the Central Statistical Administration, 287 million tons of oil were extracted in the first 6 months of 1979. The Soviet Union continues to hold top place in the world in oil production. Here is what our commentator, Yakov Malykin, writes:

Every other ton of oil extracted in the USSR comes from Western Siberia (words indistinct) the center of oil extraction. Siberian oilmen carry out their work in unimaginably difficult circumstances. Severe winters, (words indistinct) communications system, the necessity to build towns (words indistinct)--all this requires huge investments. Fully understanding the importance of supplying the national economy with fuels and raw materials, Siberian oilmen insure the increase of black gold extraction by 30 million tons yearly, enabling the Soviet Union to increase its oil supplies to the CEMA member countries in accordance with their growing needs.

In the next 5-year plan our friends will receive 20 percent more oil than in the present period. The economy of the CEMA member countries is developing rapidly. The consumption of electric power by the population is increasing steadily. Here are some figures: Hungary has been using 20 times more energy in the past decade as in the past. It has increased by three times the electric power directed to the economy. Due to close CEMA cooperation and the implementation of joint programs, also regarding the supply of fuels, the fraternal countries are successfully fulfilling the tasks aimed at meeting the increasing energy needs of the national economies. This is also proved by the fact that the CEMA countries represent the only union of states in the world capable of answering fuel needs through their own production. They import from other states no more than 1 percent of their total energy and fuel resources.

The economy of the CEMA countries is developing dynamically with new tasks linked to the steady increase in fuel consumption. One of the main solutions in connection with these tasks is the implementation of the special long-term program of cooperation in energy, fuels and raw materials. This (words indistinct) involves a number of measures, including that of developing through any means the national fuel resources of each individual CEMA country. This development is determined not only by the need to increase the production of coal, bituminous shale, brown coal and so on; the long-term program regards the use of oil and gas, first of all, as valuable raw materials for the chemical industry.

Many examples can be given regarding the close attention paid by the CEMA countries to the development of national fuel resources. In Hungary, for instance, a broad program

was set up regarding the development of the energy industry. Many measures were taken regarding the use of coal resources, a field in which the Soviet Union gives wide assistance to Hungary. Due to efforts by Soviet and Hungarian geologists the prospecting of the [word indistinct] coal field has been recently concluded. It has been established that more than 130 million tons of high quality coal can be found in the region. Three new mines will be built here with Soviet aid and currently roads are being built and several auxiliary services have already been commissioned. The construction of the power unit, based on coal, which is to be installed at Maritza [word indistinct] power station in Hungary, has already been completed. Maritza [word indistinct] supplies the cheapest electric power in Hungary. Preparations for the development of a new coalfield in central Poland are speedily progressing.

Another important line defined by the long-term program is the development through all means of nuclear-based electric power. The CEMA countries have drawn up a joint project for the construction of nuclear power stations. At the June CEMA session in Moscow an important agreement on international cooperation was signed for the development of nuclear electric equipment. The main role in the development of nuclear power stations will be played by the USSR, which has wide experience in the field.

The advantages offered by nuclear electric power are shown in Czechoslovakia. The nuclear power station at Jaslovske-Bohunice, built with Soviet assistance, was commissioned at the beginning of the year. Experts reckon that Czechoslovak nuclear power stations will supply in 10 years time as much electric power as required by this country in 1967. Following the implementation of this program, nuclear power stations totaling 37 million KW will be built in the CEMA countries. This means that the European CEMA countries and Cuba will not have to increase each year the import of energy resources [words indistinct]. These and other projects of the CEMA countries dynamically develop the national economies and successfully fulfill the most important contemporary economic tasks.

CSO: 5100

## INTERNATIONAL AFFAIRS

### BRIEFS

**CMEA ENERGY SYSTEM EXPANSION**--The CMEA countries have agreed to enlarge their "Mir" energy system. New transmission lines are to be built from the Soviet Union to the GDR, Poland, Bulgaria and Romania. By 1990 the power grid will embrace the territory from the Elbe to the Urals. The overall capacity of its electric power stations will reach 300 million kilowatts. To increase the energy and fuel potential, the council countries are speeding up the construction of nuclear power plants and they invest heavily in the development of oil and gas deposits in Siberia and the Urals. [Moscow World Service in English 0100 GMT 10 Aug 79 LD]

CSO: 5100

## BRIEFS

SCIENTISTS' 'CONSERVATISM'--Some of our tasks have rather long-term implementation provisions. They concern top-ranking innovations connected with the development of fast breeding, sodium-cooled reactors. Those reactors will produce 30-50 times more energy from 1 kilogram of uranium than the present, so-called light-water reactors; but we can count on using them in the electrification system only around 1995. The application of partial research results is successful in processing the nuclear power stations' burnt-out fuel by using the fluoridation method in which we are cooperating with the USSR. That method was used for regenerating palladium and platin catalysts used in the chemical industry in producing caoutchouc, gasoline, nitric acid and so forth and it was tested in cooperation with the chemopetrol concern in the Kaucuk Kralupy plant. In that sphere alone it will save our national economy several million korunas annually and, moreover, it has also proved useful in cleaning synthetic diamonds. [Excerpt] [Prague RUDE PRAVO in Czech 7 Aug 79 p 3 AU]

CSO: 5100

## INTER-AMERICAN AFFAIRS

### VENEZUELA, ARGENTINA SIGN NUCLEAR ENERGY COOPERATION

Buenos Aires LATIN in Spanish 2016 GMT 8 Aug 79 PA

[Text] Caracas, 8 Aug (LATIN)--Today, Argentina and Venezuela signed an agreement on using nuclear energy for peaceful purposes. The agreement includes the areas of nuclear research and technology and the construction, development and utilization of experimental nuclear power reactors. The agreement, which is in the framework of the basic technical cooperation agreement between Buenos Aires and Caracas signed in 1972, will be in effect for 5 years and will be automatically extended for 1-year periods.

Argentine Ambassador Federico Barttfeld and Venezuelan acting Foreign Minister Rafael Leon Morales signed the agreement in the Foreign Ministry in the presence of several Argentine and Venezuelan officials on the eve of Barttfeld's departure for Romania, where he will be the new Argentine ambassador. The agreement foresees that important advances will be made in nuclear cooperation. It is within the framework of the basic technical cooperation agreement existing between the two countries and was studied and approved by the Venezuelan National Council for the Development of Nuclear Industry and by the Argentine National Atomic Energy Commission, according to an [Argentine] Embassy communique.

Two years ago, Argentina became the first Latin American country to export nuclear technology when it signed another cooperation agreement with Peru. That agreement included the delivery of a zero power research reactor [reactor de potencia cero para la investigacion]. The present agreement consists of 12 articles. It notes that the two countries will reciprocate in supplying and selling nuclear material, the renting of services and in the transfer of the equipment necessary for development programs in order to utilize nuclear energy for peaceful purposes.

The agreement adds that the two countries will cooperate in the research and application of nuclear energy for peaceful purposes and will carry out common efforts in these activities. The production of isotopes and their application, prospecting for minerals of nuclear interest and their possible benefits and utilization for peaceful purposes are included in article three. There will be an exchange of experts, professors and scholarships, the document notes. The document adds that mixed working groups will conduct specific scientific research and technological development studies.

CSO: 5100

## INTER-AMERICAN AFFAIRS

### ARGENTINE NUCLEAR ENERGY OFFICIAL DISCUSSES ACCORD WITH URUGUAY

Buenos Aires TELAM in Spanish 0101 GMT 14 Aug 79 PY

[Test] Buenos Aires, 13 Aug (TELAM)--The chairman of the National Atomic Energy Commission (CNEA), Rear Adm Carlos Castro Madero, announced tonight that an agreement for nuclear cooperation with Uruguay has been signed which will cover the 1979-80 period. It includes technical assistance, the exchange of experts and the sending of students on scholarship to Argentina--all with the objective of achieving joint nuclear development.

In statements to TELAM today after arriving at Jorge Newberry Airport from Montevideo, he indicated that the agreement basically includes the fields of radioisotopes and prospecting for and exploitation of uranium. Asked about his activities during his stay in Uruguay, Castro Madero reported that he had visited the nuclear research center and, with authorities of that country, had analyzed various aspects of nuclear research and power. He stressed in this respect that the neighboring nation is, through notable efforts, achieving tangible progress which can be seen in the successful operation of a 10-kilowatt reactor; it also plans to build another reactor of between 1 and 3 megawatts.

He also indicated that he believes these are the stages a country must go through in order to prepare its infrastructure for the undertaking of more extensive projects in the field of nuclear power. Asked how many years it will take Uruguay to generate nuclear power, the CNEA chairman answered that it is difficult to say because everything depends on economic efforts and on human resources, but I believe they are on the right path and will be in a position to achieve it during the decade of 1990.

He was later asked whether the recent agreements on nuclear cooperation signed with Latin American nations were part of a plan to include the whole continent. He said that it was the government's policy to offer cooperation in this sector, seeking authentic and real Latin American integration. Finally he explained that, although there are no signed agreements with Brazil, there is room and good prospects for achieving them. He admitted that there is interest at the level of nuclear authorities of the two countries but, officially, nothing exists yet.

CSO: 5100

**CASTRO MADERO ON URANIUM MINING, PRICE INCREASES**

Buenos Aires NOTICIAS ARGENTINAS in Spanish 2114 GMT 15 Aug 79 PY

[Excerpt] Cordoba, 15 Aug (MA)--The chairman of the National Atomic Energy Commission (CNEA), Rear Adm Carlos Castro Madero, has stressed here that "some Argentine businessmen have increased by 10 times the price for work carried out at Atucha and Embalse in comparison with foreign quotations." Castro Madero gave a talk today at the Provincial Energy Enterprise of Cordoba (EPEC). The commander of III Corps, Maj Gen Luciano B. Menendez; air force and navy officers; and provincial authorities attended the talk. Afterward, Castro Madero made several announcements to the press.

Castro Madero revealed that "the land has already been handed over to the Cordoba enterprise (which he did not identify) which won the bid. So it can begin work in the Gigantes District where it will begin extracting uranium before the end of the year." He added that "the uranium reserves in the Los Gigantes area amount to 1,400 tons of concentrated mineral which has a yield of 3 per 1,000. It is the first mining industrial complex for producing uranium under private control in the country."

Regarding the price increases of up to 10 times by Argentine businessmen, he remarked that "it is not in line with CNEA policy which is trying to obtain larger participation of national firms in the construction of nuclear plants." "Therefore," he added, "after the approval of Decree No. 302 which contemplates the drafting of a nuclear promotion law, CNEA will propose that cost budgets be kept within reasonable limits."

During his talk to military and government authorities on "the Argentine nuclear plan and its future plans," Castro Madero revealed that regarding the Embalse plant "the renegotiation carried out with the contracting Canadian firm between 1974 and 1976 provoked an increase of \$129 million in the total price of the plant." He remarked that the plant's final cost when it is dedicated in May 1982 will amount to \$800 million.

CSO: 5100

## ARGENTINA

### BRIEFS

**IMPORT OF NUCLEAR MATERIALS**--Buenos Aires, 28 Jul (TELAM)--The National Customs Administration resolved that any import of mineral elements or nuclear materials and radioactive substances or materials will have to be authorized by the National Atomic Energy Commission (CNEA). The same regulation applies to finished articles and consumer products containing radioactive materials, such as radioluminescent products, electric or electronic equipment, static eliminators, glassware, ceramics and various alloys. [Buenos Aires TELAM in Spanish 1115 GMT 26 Jul 79 PY]

CSO: 5100

NUCLEAR CONTRACT WITH FRENCH FIRM TERMED 'UNNECESSARY'

Sao Paulo O ESTADO DE SAO PAULO in Portuguese 9 Aug 79 p 40

[Article by Paulo Andreoli: "NUCLEBRAS [Brazilian Nuclear Corporations] Imports Items the IPEN [Energy and Nuclear Research Institute] Already Has"]

[Text] The German-Brazilian nuclear agreement foresaw almost everything. Strangely, it left out an important phase: the conversion of nuclearly pure uranium (ammonium diuranate or yellow cake) into uranium hexafluoride, the gaseous substance required for the enrichment process. Strangely, because the agreement created subsidiaries for everything, but did not include this step among them. To resolve this problem, NUCLEBRAS now decided to contract the services of the French company Pechiney, which will provide Brazil with hexafluoride, ignoring--through forgetfulness or for reasons that are more political than technical--the Energy and Nuclear Research Institute of the University of Sao Paulo which has been developing this technology for several years.

The terms of the contract between NUCLEBRAS and the French company are not known, but according to IPEN Superintendent Ernani Amorim "it is almost certain that the French will produce the hexafluoride with imported fluorine." In Amorim's opinion "This contract is unnecessary" and NUCLEBRAS probably knows it. The IPEN presented a plan to the government suggesting the use of fluorite, a mineral is found in abundance in Santa Catarina. The processing of fluorite would produce fluorine, which is now imported. NUCLEBRAS and the Sao Paulo State government, according to the IPEN proposal, could invest in an industrial unit for the production of hydrofluoric acid and fluorine needed for the manufacture of many products and also for the electrical systems. With fluorine it would be possible to obtain uranium hexafluoride (for enriching uranium) and sulfur hexafluoride (for cooling high-tension transformers) on one hand, and on the other, it would serve the transformation industry. The government, together with the IPEN, could invest in units for the production of hexafluoride, a technology practically known today by the scientists of the University of Sao Paulo. Agreements between the Sao Paulo government and that of Santa Catarina for the exploitation and industrialization of fluorite have already been initiated despite the fact that NUCLEBRAS shows itself to be skeptical and disinterested on the subject.

If there are reasons why NUCLEBRAS is snoving the IPEN out of the nuclear program, they could only be related to a lack of trust in the technology developed by the Sao Paulo scientists. It will not be the first time that Paulo Nogueira Batista, president of NUCLEBRAS, pushes the national scientific community to one side in favor of a pure and simple import of technology or services.

For the superintendent of the IPEN, however, NUCLEBRAS has no arguments it can place against the IPEN proposal. "At the beginning of the decade of the 60's," explained Amorim, "the institute (previously the Atomic Energy Institute) developed the first pilot unit for the production of nuciearly pure uranium—a technology which is fully known today. In 1972, the second phase was begun, the production of uranium tetrafluoride. At the end of last year, the IPEN began to produce uranium hexafluoride."

The importance of uranium hexafluoride is understandable. Uranium in a gaseous form (uranium hexafluoride) is used in the enrichment process. This is true for all the enrichment processes, whether it be by centrifugal jets (obtained by Brazil in the agreement with Germany) or the Soviet or North America processes (gaseous diffusion or the ultracentrifuge).

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CSO: 5100

## NUCLEBRAS POSTPONES ORDERS FOR ANGRA 2, 3 EQUIPMENT

### Orders Postponed Indefinitely

Rio de Janeiro JORNAL DO BRASIL in Portuguese 8 Aug 79 p 16

[Text] The placing of orders for the Angra II and Angra III nuclear powerplants with national manufacturers scheduled for this year, was postponed indefinitely as a result of the delay in the civil construction at the Angra II site and the indecision as to the new site for Angra III.

Although there are lines of credit open in FINAME [Fund for the Financing of Machinery and Equipment], and the Development Bank of Rio for the financing of the national part of that equipment, orders will be placed only after the new schedule for the powerplants is prepared.

The equipment to be provided nationally--containment vessel, rolling cranes and various types of tubing--were contracted from a consortium consisting of COBRASMA, CONFAB and Bardella [expansions unknown], all of Sao Paulo. These orders were for nearly 30 percent of the equipment in each of the two powerplants (appraised altogether at approximately \$1.5 billion each).

Industrialists of the sector of capital goods have the hopes that the orders may be placed next year, in part alleviating the situation of the sector which is operating with a high rate of its capacity idle. However, there is no official forecast.

The corporation responsible for the construction of the two powerplants, Furnas Electric Powerplants, postponed the placing of orders because it cannot risk having the equipment completed and delivered before having the installations ready for them. In addition, the scarcity of resources in the electrical sector does not recommend the allocation of the few resources available for materials and equipment not needed immediately. That is the reason for the need to wait for the preparation of the new schedule for the civil projects. That schedule depends, in the case of Angra II, on the solution of the project for reinforcing the foundations of the powerplant, which after they were completed were rejected by the National Nuclear Energy Commission. In the case of Angra III, it depends

on the schedule for Angra II because the third nuclear unit will have to maintain a difference of phasing of a year and a half, and specifically it will have to wait for a decision on its new location, which has been under study for more than a year by Furnas and by NUCLEBRAS [Brazilian Nuclear Corporations]. Up to now there is not even an inkling as to when that question will be decided.

The nationally-manufactured equipment for Angra II and III to be financed by FINAME, up to last year reached 6 billion cruzeiros, most of it destined for Angra II, with a schedule of disbursements for a period of 3 or 4 years.

#### Cancelled Orders Were Large

Rio de Janeiro JORNAL DO BRASIL in Portuguese 9 Aug 79 p 22

[Text] Sao Paulo--When it cancelled the orders it was going to make to the CONFAB-Bardella-COBRASMA Consortium for the equipment for the Angra II nuclear powerplant in Rio, NUCLEBRAS explained that the contract for the orders should be made next year. That which was not ordered represented nearly \$100 million (2.7 billion cruzeiros) in orders to the companies.

Thirty days ago the businessmen were already suspicious that the orders would be cancelled because NUCLEBRAS kept delaying the signing of the purchase contracts with COBRASMA and Bardella. It had already signed a contract with CONFAB for the manufacture of the containment vessel and other equipment, and one of the orders for 200 billion cruzeiros [as published] was made 60 days ago. NUCLEBRAS must renegotiate that contract with CONFAB Industrial.

Fifteen days ago, finally, NUCLEBRAS officially notified of the postponement for a year of the signing of contracts with COBRASMA and Bardella. There was no talk of supplying the equipment for Angra III. A businessman linked to the consortium explained last night that there is no contesting the NUCLEBRAS decision since it seems to be a matter of a lack of resources or of rescheduling of the nuclear program.

The companies applied \$55 million in the past two years in the purchase of technology and in the training of their technicians. Some sent technicians to courses abroad with a view to their qualification. CONFAB Industrial will manufacture the containment vessel for Angra II with special vanadium steel beams, in addition to doing the welding of a good part of the equipment with its own technology. Bardella will produce equipment valued at \$30 million.

## Angra Orders Are Small

Rio de Janeiro JORNAL DO BRASIL in Portuguese 9 Aug 79 p 22

[Text] Equipment for nuclear powerplants Angra II and III ordered up to now from national manufacturers—who had the new orders cancelled—reach 640 million cruzeiros, only 10 percent of the value of the equipment covered by FINAME for purposes of financing last year.

Of the total of orders made, 51.2 million cruzeiros pertain to installation equipment, purchased directly by FURNAS, and the rest to the powerplant itself, purchased by FURNAS through NUCLEN--NUCLEBRAS Engineering, Inc.

The principal order was given to CONFAB for the construction of the containment vessel for the reactor, valued at 397 million cruzeiros, and the tanks and pressure vessels, valued at 113 million cruzeiros. The other equipment ordered, were drainage tubing purchased from the Aflon Industry for 3.3 million cruzeiros; and a part of the purification of condensation system for the Angra II powerplant, which Cilsan is manufacturing at a cost of 75 million cruzeiros.

The installation equipment—a portico and a crane, which will be used in the installation of Angra II and III--were ordered from Torque S/A of Sao Paulo.

All of these are minor pieces of equipment, with the exception of the containment vessel ordered from CONFAB. That company, together with COBRASAMA and Bardella, were chosen by NUCLEBRAS to provide the main nationally-built equipment for Angra II and III, with the guarantee that they would also receive the orders for subsequent nuclear powerplants (without a determined location and not yet ordered from Germany).

The president of FURNAS, Licínio Seabra, yesterday received the preliminary report from NUCLEN on the project for reinforcing the pilings of the site for the Angra II reactor required by the National Nuclear Energy Commission (CNEN). FURNAS engineers are going to analyze the report and discuss it with CNEN. According to FURNAS, the final project for the reinforcement of the piles, which will allow a resumption of the normal progress of the Angra II project, should be finished in October.

### Delays Normal Says Company

Rio de Janeiro JORNAL DO BRASIL in Portuguese 9 Aug 79 p 22

[Article by William Waack]

[Text] Bonn--The nuclear reactor at Grafenrheinfeld in southern Germany--a reference installation for Angra II--has a lag of almost 2 years and its construction, scheduled at first to last 55 months, will probably extend to 72 months.

"Delays are perfectly normal and are no exception to the rule that every nuclear reactor built in Germany always takes a little longer than planned for completion," declares a Kraftwerk Union spokesman in Erlangen. Grafenrheinfeld, with an overall yield of 1,300 megawatts, will begin operations experimentally next year. Its delivery to the customer (a Bavarian electric company) will take place at the beginning of 1981.

Cautious, KWU sources avoided providing any reason which would lead to "hasty comparisons" between the reference plant of Grafenrheinfeld and the Angra project. Therefore, the construction time of 72 months is calculated as of the moment in which the foundation work is completed and the foundation released for the construction of the reactor building itself and the subsequent installation of various components. "Grading and piling work are not considered construction work in itself," explained a company technician, who prefers to remain unknown. "The average construction time for a reactor in Germany or abroad--there is no difference for us--is calculated as of the moment in which the foundations of the site are completed. As an average, thereafter, it takes 70 months to build the reactor."

The date of January 1975 quoted by the KWU as the beginning of the construction of Grafenrheinfeld, did not include grading and foundations, however, "which take some months," according to a company source. No exact figures were mentioned. The Germany company believes there could be "false interpretations" based on German conditions.

"It is important to point out," said a KWU technician, "that we here in Germany do not face problems of foundations as complicated as those of Angra. It can even be said that the foundation work at Angra is the most difficult the German firm has seen in the construction of all the reactors it has built up to now."

Thus, the German technicians believe that a comparison between Angra and Graferheinfeld can only be possible as of the moment in which the piling operations in Brazil are completed. "Then there can be a good point for comparison," explained a KWU technician.

The same source continued: "The KWU cannot be made responsible for foundation work at Angra, which were entrusted by FURNAS to another company. In the case of the reactors in Iran, which were halted by political reasons, there was also a slight delay due to the fact that the German firm was forced to create enormous infrastructure projects in a region where there was absolutely nothing.

#### Argentina

The KWU believes that the trip by Minister for Economics Count Lambdorff to Buenos Aires at the end of August will be a great help in the competition with Canada for providing a nuclear reactor and heavy water installations to Argentina. At the end of August, an interministerial commission created by the Argentine Government should present the results of a reexamination of the entire nuclear program of the country and then the National Atomic Energy Commission can say who will receive the contract. However, the Germans do not expect any final decision by the Argentine government before the end of the year.

Directors of the German company are complaining of a "strong Canadian campaign" in Argentine newspapers aimed at creating the impression that Canada will not demand the application of safeguards to all the items in the Argentine nuclear program (full scope safeguards) in case they receive the order for the heavy water reactor.

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CSO: 5100

POSSIBLE NUCLEAR POWER PLANT UNDER EXAMINATION

Santiago EL MERCURIO in Spanish 30 Jun 79 p C-1

[Text] The president of the Chilean nuclear energy commission, Col Rosmundo Pizarro Seymour, announced that "feasibility" studies have been undertaken to determine whether the country will, in the future, be able to incorporate a nuclear power plant into its electrical development program.

The information was revealed during a press conference yesterday in the Diego Portales building by the Chilean Nuclear Energy Commission and the OAS in order to make known the background of the 11th Meeting of the Inter-American Nuclear Energy Commission (CIEN), which will begin in Santiago next Monday at 1800 hours and will continue until 7 July.

Asked whether Chile would join those many countries in the area which are seeking alternate plans in the face of the growing world energy crisis, Colonel Pizarro stated that "since 1974, when the world energy crisis began, the efforts of the Chilean Nuclear Energy Commission have centered on the national radioactive resources plan to determine what our possibilities are as far as this strategic material is concerned, and whether it is feasible to incorporate a nuclear power plant into the national electrical system. To that end, he added, the President of the Republic ordered that this activity be carried out jointly by Chilectra [Chilean Electric Company, Ltd.] and ENDESA [National Electric Company].

Comparing the level of Chile's nuclear activity to the rest of Latin America, Pizarro stated that it "is rather high" and could be placed after that of Brazil and Argentina. He added that despite a rather late start, during this administration much lost ground had been regained in the field of nuclear energy.

Colonel Pizarro said that at this meeting of the OAS, Chile had been asked to present a specific theme of a technical nature, since it was not

expected that each nation reveal its nuclear advances, but rather that regional programs be examined and that plans for the coming 2-year period be studied.

"Moreover," he added, "we have a proposal for that meeting, which consists of the formation of human resources; that is, of personnel trained in the use of radioisotopes and radiation, in the mining and development of radioactive materials, in the development of nuclear-electric programs, and in the processing of nuclear information."

The director of the OAS in Chile, Guillermo Belt, said that the fact that the conference was being held in Chile justified recalling former successes, and, in that vein, he brought to mind other events which have taken place here. In response to a question, he pointed out that agreements and studies are oriented toward the peaceful use of atomic energy, so that there is no conflict with the postulates of the conference in Tlatelolco, Mexico, where it was agreed that Latin America be a region free of nuclear energy used for military purposes.

#### The Meeting

Fourteen member nations will participate in the meeting: Argentina, Bolivia, Brazil, Costa Rica, Ecuador, El Salvador, Honduras, Paraguay, the United States, Uruguay, Venezuela, Guatemala and Chile. Also present will be observers from Spain and Canada, as well as technical experts.

At yesterday's press conference, Colonel Pizarro stated the objectives of CIEN and revealed the agenda of the meeting. According to Pizarro, CIEN is a technical commission of the OAS which serves as a consultation center for member states and facilitates cooperation among them in matters related to the peaceful application of nuclear energy. He added that CIEN consists of a representative from each country and may formulate technical recommendations directly to the governments of the member nations through their representatives. The governments can also designate alternate representatives and special advisers.

The executive director of the Chilean Commission, Marmaduke Abarzua, said that distinguished persons in the nuclear energy field would attend the meeting.

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CSO: 3010

## DECISION POSSIBLE BY 1980 ON NUCLEAR POWER PLANT

Santiago EL CRONISTA in Spanish 6 Jul 79 p 10

[Text] The executive director of the Chilean Nuclear Energy Commission, Colonel Marmaduke Abarzua, spoke yesterday on the planning studies, construction and development of a 600-megawatt nuclear plant. The station will be incorporated into the national grid, supplying safe and economical electrical energy, according to Abarzua, who spoke during the technical symposium held at the 11th Meeting of the OAS's Inter-American Nuclear Energy Commission (CIEN), a conference which ends today.

Colonel Abarzua outlined the enormous benefits which this project will provide for the country. For instance, he stressed the improved scientific-technical level and the improved infrastructure which would result, the training of industry, and an improvement in quality. He added that studies for the completion of this project are being carried out jointly with technicians and experts from the National Electric Company (ENDESA) and Chilectra [Chilean Electric Company, Ltd.], the country's two main electricity corporations.

Colonel Abarzua indicated later that one of the principal objectives of electrical planning was to propose energy alternatives to supply the demand for electricity created by national development programs at a minimum cost to the country. He explained that meeting this objective required detailed analysis, studies and calculations procedures, taking into account the innumerable variables and factors which enter the total picture. Among the factors, Colonel Abarzua mentioned supply and demand for electrical energy.

It is hoped that by next year a decision can be made to begin the construction of the nuclear power plant, thereby assuring its completion within approximately 6 years.

Abarzua also referred to the role of nuclear energy as a producer of raw material, as in the specific case of uranium. He explained that at the moment different projects are being developed relating to metallurgical research and the blueprinting, construction and operation of experimental, pilot and industrial plants designed for uranium production.

URANIUM EXPLORATION AGREEMENT SIGNED

Santiago EL CRONISTA in Spanish 6 Jul 79 p 10

[Text] A pact will be signed today between the government of Chile and the UN Development Program (UNDP) for extensive uranium exploration in a 5,000-square-kilometer area of Chile. The ceremony will take place at 1000 hours in Room 5 of the Diego Portales building.

The first agreement of this type was signed in October 1975 and expired on 30 June this year. The government of Chile apportioned 4.8 million dollars and the UNDP 1.2 million dollars. These funds permitted the financing of equipment, scholarships, experts and on-site prospecting work, all of which represented the exploration of 105,000 square kilometers of Chilean land.

Areas explored in the last 2 years were: Salar de Atacama, Copiapo, La Serena-Vicuna, Los Vilos, La Ligua, Talca, Cauquenes, Concepcion-Santa Juana and Valdivia-Rinihue. Positive indications of the presence of uranium were found in 5,000 square kilometers in different areas of the country.

In this second phase, Chile will put up 2 million dollars and the UNDP 500,000. The funds will be used for research over a 2-year period to determine--definitively--the existence of uranium deposits in the 5,000-square-kilometer area represented by all the explored zones except Valdivia-Rinihue.

Specialists from the UNDP and the Chilean Nuclear Energy Commission agreed on the pact's great importance, since, if the final outcome is as planned Chile will become an important producer of uranium, the basic mineral for the production of nuclear energy for electricity generation.

The 11th Meeting of the Inter-American Nuclear Energy Commission will close today with a session beginning at 1500 hours in the Diego Portales building, scene of the conference.

The meeting began last Monday and was participated in by 80 specialists from 17 American countries, in addition to observers from Spain and various international organizations.

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CSO: 3010

## SOVIET ENGINEER COMMENTS ON NUCLEAR POWER SAFEGUARDS

[Editorial Report LD] Riga SOVETSKAYA LATVIYA in Russian on 22 July 1979 publishes on page 2 under the rubric "Plans and Achievements" and the heading "Nuclear Power Today and Tomorrow" a 700-word APN-attributed Lyubov Sobolevskaya interview with Leonid Voronin, chief engineer of the USSR Power and Electrification Ministry All-Union Nuclear Power Association, pegged to the 5th anniversary of the commissioning of the first Soviet nuclear power station.

Voronin briefly describes Soviet nuclear power engineering since then and the program for its further development. In reply to a question about insuring the safety of nuclear power stations Voronin states that "a system of state supervision over security at all stages--from planning to operation--has been created."

CSO: 5100

USSR

## LENINGRAD CONFERENCE DEBATES NUCLEAR POWER ENGINEERING

Moscow TASS in English 1124 GMT 13 Aug 79 LD

[Text] Leningrad, August 13, TASS--The further development of power engineering in the European part of the USSR will be based on atomic power production. This was said at a conference of Soviet power engineers held here. The leading specialists in this branch stressed that such a solution of the fuel and energy problems is provided for by the economic development program adopted at the 25th Congress of the CPSU.

Already during the current five-year-plan period (1976-1980), new production capacities commissioned at atomic power stations will exceed 13 million kilowatts. Construction and erection work is under way at a number of new atomic power stations. These will include radically new, heat and power plants which will supply industrial centres with power and hot water. According to preliminary estimates the capacity growth rates of Soviet atomic power stations will almost double. Two types of power stations, stations with vessel-type and multi-channel reactors, will be built within the next five-seven years. Technical specifications are now being prepared for the serial construction of atomic power stations with reactor-turbine-generator units of a million kilowatts.

The use of structural ferroconcrete sections will ease considerably building operations. Specialists have estimated that such a method of construction of atomic power stations will help out labour requirements by 10-15 per cent. This principle of construction work will be used at two more construction sites in the nearest future.

CSO: 5100

## BRIEFS

ATOMIC ENERGY EXPERIMENTS--Preparations were completed today in the Moskovskaya Oblast town of Dubna at the Joint Nuclear Research Institute for a new series of experiments to study atomic energy. Our correspondent was told by Aleksandr Mikhaylovich Baldin, director of the High Energies Laboratory and corresponding member of the USSR Academy of Sciences, that in recent years theoretical physicists have advanced the hypothesis that, besides the accepted atomic nuclei, in certain conditions new forms of nuclear matter also could exist. This matter should possess heightened density and large reserves of energy. An experiment will be carried out on the Dubna accelerator, which is capable of accelerating atomic nuclei to a speed close to that of light. In conducting this research, the scientist stresses, we are entering quite a new field of physics, where laws as yet unknown to us operate. [Text] [Moscow Domestic Service in Russian 1445 GMT 10 Aug 79 LD]

CSO: 5100

BRIEFS

**DUTCH ON NUCLEAR ARMS DEPLOYMENT--Bonn--**Any decision to deploy modernized nuclear weapons in Western Europe in response to the growing threat of Soviet medium-range missiles should, in the view of the Netherlands, have the joint support of all NATO states. Only then could a decision be taken where to base them, Netherlands Foreign Minister Christoph van der Klaauw told the press in Bonn today. The NATO decision, due to be taken at the end of this year, on the introduction of medium-range missiles, while including them in an arms limitation offer to Moscow, was one of the main topics of his talks in Bonn, where he arrived Sunday night. Besides the Federal Republic, only the Benelux region is a likely site. Van der Klaauw said his conversation with Federal Foreign Minister Hans-Dietrich Genscher had shown that both countries were thinking "on the same lines" on this issue. [Text] [Hamburg DPA in German 1732 GMT 14 Aug 79 LD]

CSO: 5100

## AUSTRIA

### BRIEFS

**TU PRESIDENT ON NUCLEAR POWER REFERENDUM**--Great commotion in all three parties and sharp protests from the camp of the nuclear opponents was triggered by Federation of Austrian Trade Unions President Benya this weekend when he said that an effort to put the nuclear plant of Zwentendorf into operation by way of a new referendum would bring a different result than the one last year. Federal Chancellor Kreisky reacted in a noncommittal way, while other representatives of the Socialist Party strongly rejected the proposal, and People's Party Chairman Mock alleged a "transparent two-faced game" between trade unions and the Socialist Party. In an interview with the Austrian broadcasting corporation (ORF) Benya again advocated his already well-known attitude: He and the majority of trade unionists are for nuclear energy. They would not start any new initiatives themselves, but would support a pro-Zwentendorf initiative. A new referendum would bring a different result because last year the people had not been properly informed and also there had been elections in the offing. Kreisky reacted in a reserved way, saying should there be "correspondingly strong political forces" in favor of a revision of the referendum, the question would have to be tackled in parliament. [Vienna DIE PRESSE in German 13 Aug 79 p 1 AU]

CSO: 5100

DHOORE INTERVIEWED ON CONTROL, EMERGENCY SCHEMES AT DOEL, TIHANGE

Brussels KNACK in Dutch 7 May 79 pp 23-30

[*"This Week on the Cover"* article by Frank de Moor and Johan Struye, including report on interview with Minister Luc Dhoore: *"The Polluter Pays Is a False Slogan;"* passages in slantlines printed in italics]

[Text] The report by Belgian experts on the Harrisburg incident, the unrest around the nuclear plants in the French Gravelines near the Belgian coast, doubts with respect to disaster plans and control concerning the nuclear plants of Doel and Tihange are just some of the problems Minister of Health and Environment Luc Dhoore (CVP[Social Christian Party]) is concerned with. In the light of all that, the document in which he describes "the state of the environment" which will be made public this week, is evidence of a lot of good will.

The Harrisburg incident in the United States, just like the disaster with the Liberian oil tanker Amoco-Cadiz last year, made it very clear once and for all that preservation of the environment is not an obsession of /green boys/ or often unbelievable action groups, but that indeed it has something to do with international patents, giant enterprises or ghost companies in Liberia. Management circles in Brussels more than once have allowed degradation of our environment often in order to draw foreign, but most often environment-hostile investments. The German fluoride plant Bayer-Richman in Bruges or the American mercaptan company of Philips Petroleum in Tessenderlo are only two examples of that. Consequently he who reads through Minister Luc Dhoore's "State of the Environment" and reads there, just as 3 years ago in the 11-volume "Inventory of the Environment" by former Secretary of State Karel Poma (PVV [Party of Liberty and Progress]), all the laws, regulations and recommendations which are in force in Belgium with respect to water-, air-, sound- and other environmental hazards, and then also takes stock of how many control agencies are supposed to be dealing with them, must indeed be extremely disillusioned when, 83 pages later, he sees how things are with the /"qualitative condition"/ of all that. Half of "The State of the Environment" is indeed devoted to that.

In his conclusions Minister of Health and Environment Luc Dhoores therefore urges expansion and/or regrouping of existing administrative means and structures in order to be able to act better and tackle the environment problems even on an international scale.

In this context the meeting of the ministers of environment of the OECD member states in Paris on 7 and 8 May was very important. Besides the United States, Belgium was the only country there which was able to produce actual data thanks to "The State of the Environment." However, since safety of the environment, as a result of the Harrisburg report by Belgian experts who visited the location of the disaster, is now more urgent than the state of our environment in general, KNACK talked with Minister Dhoores primarily about nuclear energy. For he, as minister of health and environment, is responsible for everything with respect to the safety and health of citizens outside of nuclear plants. That's why Minister Dhoores co-signed the decision when the nuclear center of Tihange was started up again, against the desire of Mayor Fernand Hubin (PS [Socialist Party]) of Hoei. We asked the Belgian minister of health and environment if he had drawn any other lessons from the incident in the United States.

Dhoores: Gradually everyone knows that there are a number of basic differences between the Belgian nuclear plants and those of the type in use in Harrisburg, so that a similar incident, at least technically, is less probable in Belgium. Moreover, thanks to the required double containment, we are better protected against possible accidents in the reactor building itself. That also became very clear when last Monday I had a first discussion with my Dutch colleague for environment in connection with the debate which is being started with the Netherlands with respect to disaster plans for the nuclear plants of Doel and Borssele in the Netherlands. There they don't have that double /containment/ and it does appear to be an important supplementary safety feature. The report by the Belgian experts who have returned from Harrisburg and which will probably be made public in parliament this week by Minister of Economic Affairs Willy Claes, in that respect is important only in a technical sense. It has little or nothing to do however with events outside of the plant since things started going wrong there. If conclusions can nevertheless be drawn from the Harrisburg incident, they are concerned instead with the carrying out of disaster- and evacuation plans and escorting of the population. Thus it looks as if once again we shall have to review and bring up to date the existing disaster plans in Belgium, as already happened before. Consequently I will ask my American colleague for environment for as greatly detailed a report as possible in that regard, in order afterward to ascertain in Belgium how, for example, access roads to the plants must be adapted, how certain materials are supplied, etc. For that matter, all of that will also be dealt with in the European context.

#### Fear Psychosis

[Question] That European approach was not very efficient in connection with the installation of four nuclear plants in the French Gravelines, near our Belgian coast.

Dhoore: Indeed. For that matter, I am not very happy with the action of the French in Gravelines, nor with their possible plans to put nuclear plants in the Meuse valley. If they had respected the anticipated articles of the Euratom treaty, we would have had the information, necessary to allow us to calculate the consequences for the Belgian environment, in our possession earlier. Nevertheless, a forum has arisen in that manner within the council of the environment, in which the consequences of Harrisburg could very well be discussed. Nuclear plants in Europe pose not only border problems, although this is of interest primarily to the member states, but they have to do with the European nuclear energy policy and its execution. Article 37 of the Euratom treaty would have to be urgently defined and better observed in this context. Nevertheless, it stipulates explicitly that every member state must inform a commission of experts beforehand how the planned nuclear plants will look, what they will discharge, etc.; that is to say, if all of that could have consequences for another member state. Well, we have received that information only now, while Gravelines will have test operations already this summer.

[Question] The nuclear plants in Gravelines started to present problems in Belgium only at the beginning of this year, although they have been under construction for a number of years already and in December 1973 were declared a public utility. You only woke up at the third public inquiry in France.

Dhoore: Yes, we have been negligent, but in the first place it is still the mistake of the French, who do not observe the relevant articles of the Euratom treaty, or interpret them in their own way. Under those articles we have been trying to obtain the necessary information for 3 years already. Thus we clearly remained polite. In that respect perhaps it is unjustified that we did not pound on the table earlier and that we waited until the problem became really serious, when our own energy problems also became topical again with the oil price increases, energy economizations and the white paper concerning economic affairs.

[Question] Harrisburg, Gravelines, it all has to do with disaster plans. Why don't you make them known and why do citizens continue to remain dependent upon action groups or papers such as HET WRYE WAASLAND to learn about them?

Dhoore: Although the government must decide on that, I personally am of the opinion that those plans indeed would have to be made public, even if a number of arguments could still be brought up against that publication. Danger of a certain fear psychosis is not imaginary, even if those plans announce primarily the phone numbers of the services which must be notified and involved in the execution of the disaster plan. On the other hand the danger of malevolent intent is not excluded either. Acts of terror or sabotage can never be completely eliminated and it is always easier to thwart known plans than fragmentarily publicized parts of them. Consequently I am of the opinion that at least the main lines of action of the various disaster plans with respect to nuclear plants would have to be made public so that the populace would no longer face the unknown at the slightest incident.

[Question] That which so far has become known in Belgium with respect to disaster plans, still leaves many doubts as to certain provisions, hospitals, evacuation possibilities, access roads, etc. Hasn't the incident at Three Mile Island been a sufficient warning or must we wait for a greater disaster?

Dhoore: The fact is precisely that the consequences of a disaster always are accompanied by an entire revolution in the industrial sector in which it occurred: /Marcinelles/ brought up the problem of safety in the coal mines, the /Innovation/ fire drew attention to fire safety and /Los Alfaques/ made everyone pay attention to the standards with respect to transportation of flammables. The bringing up to date of disaster plans in connection with the Belgian nuclear plants had however been put forward earlier and we did not wait for Harrisburg to work on that. The plans for the area around the nuclear plant in Doel have already been revised twice. Those for Tihange likewise: once in 1977 and the last time on 4 April 1979, right after the forming of the government. /Senator Hubin/, the acting mayor of Hoei, just as other mayors, received those plans on 4 April by registered mail. The fact that a number of the involved officials in his community did not know about it, is his problem. As was the shutting down of the Tihange plant, ordered by him afterward. The question as to the responsibility of mayors and governors in the matter thus is not a superfluous question.

Coal

[Question] On Monday 30 April you had a first interview in Antwerp with your Dutch colleague in order to come to a joint approach for the disaster plans concerning Doel and Borsele. Why did it not take place earlier?

Dhoore: Thus far indeed no consultation whatsoever had ever been held on that, so that officially a number of operational shortcomings could arise if something should happen with one of our nuclear plants at the border on the Belgian or Dutch side. The introduction of the French nuclear plants in Gravelines however made us feel definitely that a similar problem is international. After everything which happened in Harrisburg, we right away started to talk with the countries surrounding us. Joly Barthel, the Luxembourg minister of environment, was with me in Brussels for that reason on 14 April, while I myself went to talk in Antwerp last week with Leenderd Ginjaar, my Dutch colleague. On 14 May the three of us will have a first meeting on that account in order to arrive at a joint position in the Benelux-context as a start. The Netherlands indeed is concerned with Doel, while we might be concerned with the plants in Borsele and the nuclear plants planned in the Luxembourg Catenon.

[Question] It seems as if now everything has to be settled all of a sudden, while in Belgium one calmly continues to toy with additional plants in Doel and Tihange and we are already drawing one third of our electricity from nuclear plants, without there ever having been a policy on that in Belgium other than that of the private electricity companies. Don't you ever fear that the bill for all that laissez-faire will be dished up to you? For example, take the decision procedure for the Tihange nuclear plant.

It starts in 1965, in 1966 the site is chosen, in 1969 the land and reactor are bought, the construction permit comes in 1972, etc., without the government wondering what the benefit of all that is.

Dhoore: The most important date seems to me December 1966, when the Vanden Boeynants government had 4 new nuclear plants ordered of 900 Megawatts each, and started to look for new sites. Doel III and Tihange II were decided upon at that time, while possible sites for a third and fourth nuclear plant in Belgium were being sought. At the time Zeebrugge or Nieuwpoort were being thought of, but ultimately they became Doel IV and Tihange III, which are now indeed under construction. History however also has its rights. When I joined parliament on 1 October 1969, it was clear that the chamber indeed did not play along with this decision making. Partly because it concerned the responsibility of the government, but also because parliament and public opinion were much less sensitive in general. Personally I was confronted with the problem for the first time when, as secretary of state for regional economy and land use planning, I was in charge of the regional aspects of the energy policy. That was at the beginning of 1974, when the late Andre Leffe was minister of economic affairs. He asked the advice of my department in connection with putting the ordered nuclear plants in Flanders. The advice we delivered at the time already established clearly that additional coal generating stations were the only valid alternative for Belgium, that additional nuclear plants would best be located on an island in the ocean and that ultimately an additional nuclear plant was possible only in Doel and Tihange if they still had to be put on land. At that time we excluded the establishment of nuclear plants on our coast. Now it has been proven that our advice at the time was a valid alternative. Meanwhile it has become known that economic affairs will propose to the government to build classic coal plants once again. Meanwhile everyone has started to realize that parliament must be involved in that type of decision making, but I have also stated repeatedly that no new commitments should be entered into with respect to nuclear energy without a parliamentary debate. That would initially have been possible on the basis of the /Report of the Sages /, and indeed it was under discussion for a while. Now that must be possible on the basis of the so-called Energy white paper. We must admit, however, that we do indeed draw a high percentage of our electricity from nuclear plants in comparison with other countries and that Belgium, just as France, has carried out the recommendations of the EC pretty much to the letter and in that manner will run half on nuclear energy around 1985.

[Question] What can the government do? Must it follow Guido Brunner, the EC commissioner for energy who now suddenly proposes to halt the construction of a number of plants for 1 year, or must we learn to live with nuclear energy and urgently take up the matter of your 10-point program which seeks to guarantee its safety to a maximum degree?

Dhoore: I cannot anticipate the government position in the matter, although I will not neglect to make my opinion known by that time. On the other hand it is very essential to carry out the so-called 10-point program in any event. In it, I attach the most importance to the establishment of an

independent control body, so that the community can have permanent control carried out in the nuclear plants, while the responsibility remains with the operator.

As a result of the Harrisburg incident it once more became clear that we depend on the good will of the operator who, in spite of his good intentions, does have some motives other than serving the community. The existing control is proceeding very well, but it is not permanent and taking everything together it is in private hands which likewise are involved in the exploitation of electricity plants themselves. Hence the question whether that corps of inspectors to be established can indeed be dependent on the department of economic affairs, where there are also economic motives at play which could get the upper hand over safety considerations. It would be logical and almost symbolical for the inspectors to be dependent on the department of employment and labor, which is already now responsible for life within the plants.

[Question] That concerns only control of the established nuclear fact, but wouldn't you have to work on a system of control which could be called on already at the time of construction of any such hazardous enterprise?

Dhoore: That is an old sore and very difficult to heal definitely. The establishment of Philips Petroleum, the mercaptan industry in Tessenderlo, is the best example of that. The building is said to be standing and now questions are starting to be asked about environmental obstacles which could arise in the manufacture. It would be ideal if already at the time of the building permit there were an idea of possible operation- and discharge stipulations which have to do directly with citizens and their environment. Except for the establishment of an independent control body for nuclear plants, this is a second priority for me.

Three agencies are mainly involved in that. The municipality furnishes the building permit if the advice of town planning, employment and labor takes care of the operation permit, while the services of health and environment supply the discharge permit. I am not pressing for a fusing together of the three agencies, but I do want to set up a coordination in which the builder, when submitting a building application, must also state what he will manufacture and what he will discharge. In that manner the granting of the building permit could be made dependent on the recommendations concerning operation- and discharge conditions.

[Question] All those control mechanisms have been nicely thought up, but the polluter still isn't paying, most of our waterways continue to be as dead and dirty as years ago, and numerous industries continue to contaminate the air.

Dhoore: The polluter pays is a totally false principle. It is hypocrisy itself, embodied in a slogan, for when you impose that burden on an industry or generating station, it is directly calculated through to the sale price and ultimately it is the consumer who pays and not the polluter. That is why

this principle was soreadily accepted at the European level. As long as it cannot be stipulated that the polluter must pay with precisely that part of his profit which is not invested and which often disappears abroad, this principle remains hypocritical. Even if we must apply it. Everything we have done so far, indeed has not even been curative. We have only been able to prevent everything from becoming worse.

#### PHOTO CAPTIONS

1. p 23. In Belgium there has never been another policy with respect to nuclear energy than that of the private electricity companies. To be sure, the bill for this laissez-faire has never been presented.
2. p 23. The disaster plans which so far have become known in Belgium with respect to the safety in or around nuclear plants, are often insufficient. Thus, for example, the roads here in Tihange are too narrow. Harrisburg has proven that one must simultaneously be able to evacuate a plant and supply heavy materials.
3. p 25. The nuclear plants at the French beach in Gravelines, near the Belgian coast have been under construction for years and are almost finished. Minister of Health and Environment Luc Dhoore, after his discussion with his French colleague Michel d'Ornano on 9 April in Luxembourg, finally received the data with which computers in Belgium are now calculating the dangers of that nuclear plant for our environment.
4. p 26. If conclusions may be drawn from the Harrisburg incident, they are concerned with the carrying out of disaster- and evacuation plans rather than with the technical data the Belgian experts returned with.
5. p 29. Minister Dhoore started to talk with his Dutch colleague Leenderd Ginjaar for the first time on 30 April in order to atune the disaster plans of Doel and Borsele in the Netherlands across the bordern also. That never happened before.

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FEDERAL REPUBLIC OF GERMANY

BRIEFS

COAL GASIFICATION, LIQUEFACTION PROGRAM--Bonn--The Federal Government intends to put forward a program for the large-scale use of coal gasification and liquefaction which will involve, inter alia, the production of gasoline. This intention of the government was affirmed by Federal Research Minister Volker Hauff in his reply, published today, to an inquiry by Christian Lenzer, research spokesman of the CDU/CSU opposition group. Hauff points out that at present four research plants for coal gasification are either being built or are in operation. Furthermore, a pilot plant for nuclear coal gasification is at the planning stage. In the area of coal liquefaction, the construction phase for two pilot plants has begun. [Excerpt] [Hamburg DPA in German 1431 GMT 13 Aug 79 LD]

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## BRIEFS

FORMATION OF STANDING ENERGY COMMITTEE--Rome, August 10 (ANSA)--Italian energy problems will be coordinated by a standing committee for energy to be set up in the next few days at the Industry Ministry, Industry Minister Antonio Bisaglia announced here. Members of the committee will be Giorgio Mazzanti, president of ENI, the state natural fuels corporation, Francesco Corbellini, president of ENEL, the state electric utility company, Umberto Colombo, president of CNEN, the national nuclear energy committee, plus three experts--Professors Francesco Forte, Franco Grassini and Mario Silvestri. Professor Giuseppe Ammassari will act as secretary and Giovanni Ruoppoli will be legal advisor. The committee will have to grapple with the probable emergency situation in the next few months due to the scarcity of oil products as well as study energy saving measures through cutting back wastes, developing alternative sources and research problems connected with the use of nuclear energy. [Text] [Rome ANSA in English 0820 GMT 10 Aug 79 AU]

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UNITED KINGDOM

NUCLEAR TURBINES VALUED AT \$288 MILLION ORDERED

Perth THE WEST AUSTRALIAN in English 11 Jul 79 p 52

[Text] London, Tues: Orders worth \$288 million for two pairs of turbine generators for Britain's next two nuclear power stations will be placed soon.

The Central Electricity Generating Board has decided to let the design phase of the turbine generator contract for the Heysham advanced gas-cooler reactor to Northern Engineering Industries, while the South of Scotland Electricity Board will place the design contract for the Torness turbines with the General Electric Company.

However, both decisions have to be ratified by the Government.

Mr Norman Lamont, the junior Energy Minister, told the House of Commons yesterday that the CEGB had told him a decision still had to be made on the manufacture of the boilers for the stations, though the design phase was let to NEI.

The contracts should be tied up before the Gov-

ernment decides on the future of the Nuclear Power Company, the part-public, part-private managing corporation for Britain's nuclear power stations.

Two options appear to have emerged as front-runners. The first of these sees the Government taking a 35 per cent share in the NPC through the U.K. Atomic Energy Authority, with stakes of 13 per cent each going to five private groups.

These are GEC, which manages the NPC, NEI, Babcock and Wilcox boiler-makers, a joint holding by civil contractors Taylor Woodrow and MacApline, and a further stake shared by several smaller companies.

A second scheme favours strengthening Babcock's share of the NPC.  
—AAP.

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